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AN
ESSAY
ON THE
ORDERS
OF
ARCHITECTURE.

In which are contained

Some considerable Alterations in their Proportions, several Observations on the propriety of their Use,

And the Introduction of a

NEW GREAT ORDER.
CALLED THE
BRITANNIC ORDER.

The whole illustrated with COPPER PLATES;

By PETER DE LA ROCHE. ✓

L O N D O N.

Printed for the AUTHOR, and Sold by H. WEBLEY, in *Holborn*, near *Chancery-Lane*; and
F. NEWBERY, the Corner of *St. Paul's-Church-Yard*, *Ludgate-Street*.

M. DCC. LXIX.

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THE
NEW
GREAT
ORDER
OF
THE
ARCTIC
ORDER

Some considerable Attention in their Proportions, and
known on the property of their Use.

NEW
GREAT
ORDER
OF
THE
ARCTIC
ORDER



TO
HIS MOST SACRED MAJESTY
GEORGE III.

OF
GREAT-BRITAIN, FRANCE, and IRELAND,

KING,

DEFENDER OF THE FAITH, &c.

THIS WORK,

IS

MOST HUMBLY DEDICATED

BY

HIS MOST DUTIFUL AND LOYAL
SUBJECT,

The AUTHOR.

T O
HIS MOST SACRED MAJESTY
G E O R G E
G
G R E A T B R I T A I N , F R A N C E , A N D I R E L A N D ,
K I N G
D E F E N D E R O F T H E F A I T H



T H I S
M O S T H U M B L Y D E D I C A T E D
H I S M O S T D U T I F U L A N D L O Y A L
S E R V A N T

T H E A U T H O R

P R E F A C E.

IT will appear strange, perhaps absurd and ridiculous, that a man who has not made the art of ARCHITECTURE his occupation, who has not been the disciple of any master in that art, and has not (to make use of a vulgar expression) served his time to the business, should pretend to any knowledge, and dictate rules and precepts to the proficients in the art.

YET, strange as it may appear at first view, it is nevertheless nothing more than a natural effect of the manner in which the human mind is framed.

THE self-taught, in any science, is more likely to arrive at a superior degree of knowledge in it, than he who may have imbibed prejudices before he was qualified, either by judgement or experience, to distinguish between right and wrong. Besides, he who has no better title than a seven years apprenticeship, can boast of no more than the abilities of his master; who might have been a superior genius, and yet unable to make any thing more of his disciple than a blockhead.

THIS, for all arts and sciences.

IN ARCHITECTURE it holds good; and one may apply to mere BRED-ARCHITECTS, what BOILEAU says of poets.

C'EST en vain qu'au *Parnasse* un temeraire auteur,
Pense de l'art des vers atteindre la hauteur.
S'il ne sent point du ciel l'influence secrète.
Si son astre en naissant ne l'a formé POETE,
Dans son genie etroit il est toujours captif,
Pour lui PHEBUS est sourd, & PEGAZE est retif.

ART POETIQUE.

I WILL not pretend that I was ordained by my stars to be an ARCHITECT; yet, I may affirm with truth, that I always had a strong propensity to the study of this art, and that from my youth, as far back as I can remember, I have often amused myself in drawing elevations and plans of buildings: and being disgusted with the way of life I had hitherto led, I resolved to take another course and to give myself up entirely to the study and practice of ARCHITECTURE.

I COULD

I COULD not reasonably expect to meet with any encouragement and success, untill I had given proof to the world, that I was not absolutely unworthy of it.

I THEREFORE, applied myself to the composition of this work, which I meant at first, only as a short exposition of my principles in the art of ARCHITECTURE. And I had then no thought of introducing the novelty, which will be seen in the last chapter.

HOWEVER the matter swelled under my hands; and I found true, the late good humoured SHANDY's maxim, "Let no one sit down and say; Come, I will write a "*Duodecimo*."

IN fact, I was led by the subject much farther than I intended. And though I revere VITRUVIUS, PALLADIO, and several others, as the PATRIARCHS of the art; yet, I have frequently taken great liberties with their opinions, and made no scruple to detect their errors, when they appeared to me to have erred.

THIS will perhaps induce many, to condemn me upon confession, as a presumptuous upstart, who must be an *Ignoramus* if he, being yet but a novice, pretends to know better than, and to dissent from the opinions of, those justly revered, old experienced practitioners.

BUT, I beg a trial before I am cast; and I think I have a right to a fair one.

THOSE great masters were not GODS, but only MEN; consequently, they were liable to errors, and mistakes: and if they were so, it follows of course, that they may be detected.

WHETHER I have done this justly; whether my opinion, on those points in which I dissent from them, is grounded on truth, and is preferable to theirs; is what remains to be examined. The READER, by impartially perusing the following sheets, will be able to judge whether I am right or wrong. In general, I have endeavoured to support my opinions, with reasons drawn, either from the nature and origin of things, or from the practice of the allowed best masters; and often, from both.

THE reduction of the *Composite* order, was my principal object. The reasons I give for this reduction, are, I think, sufficient to justify the regulating of an *Order*, whose principal proportion, *viz.* its height, had never been well settled; some, making it higher, and some, lower than the *Corinthian*. If my alterations are approved of, its place and rank will be positively determined for the future.

I AM

I AM not the first, that has endeavoured to unite the *Five Orders*, as one *General Order*, whose different *Modes* correspond with each other; but I think, I have carried this correspondance farther than has been done by others.

WHAT I have said on the propriety of their use, may perhaps be looked on as mere matter of opinion. Yet, I believe, the observation of those maxims I have enforced, would be a great improvement in the art. I might have expatiated much more on the subject, but I have been taught, never to attempt at saying all that can be said.

If I have erred in my principles or assertions, I am ready to rectify the former, and to acknowledge the mistake of the latter, upon clear demonstration; and I will take such as a singular favour, from any gentleman who may be induced to take notice of any of my errors.

THERE is a general opinion, which is, that it is next to an impossibility, for an ARCHITECT to acquire any degree of reputation, if his taste has not been modelled by a survey of the *Antique Remains*; and of course, a journey to *Italy* is reckoned as necessary to finish the artist, as the knowledge of the first rudiments of the science, is, to qualify him as such.

THIS seems to me, an unhappy prejudice under which the art of ARCHITECTURE is tamely limited in its growth. And though it may be thought a too bold assertion; yet, I will venture to say, that the ARCHITECT who is not capable of any thing great of himself, and without going to *Italy*; will never perform any thing really so, were he to spend three quarters of his life in the contemplation of the *Antique Remains*.

A CURSORY knowledge of them, I grant to be necessary for giving the young artist an idea of what has been done. But this end is attainable without travelling; though, I own, the drawings we have of the remains of antiquity, may fall very short of the expression of all the beauties, still to be found in those remains: yet the ARCHITECT, whose imagination can take a noble flight, will be able to judge what they were, even in their glory, by the slightest sketches.

SUCH as must see those originals, to come at an equal degree of excellence in their own works, will never attain a higher pitch. He, who attempts at surpassing them, must look for models in his own genius.

I WOULD by no means have it understood, that I despise travelling, and hold it useless to the acquisition of knowledge in the art of ARCHITECTURE. Several great masters have

have taken useful lessons by this practice: but I hold it not necessary at present, for him who is by his genius prompted to attempt great productions; since the travels of others will furnish him abundantly with what he may want on that account. Let his imagination and his judgement do the rest, and let him imitate thereby those famous ARCHITECTS, whose works we still admire and almost adore, though in ruins; for they did not travel to find out models, with which their genius alone plentifully supplied them.

I own I have entered upon this little dissertation on travelling, in behalf of myself, and to prevent the objection that may be made to my capacity; on account of my not having been to fetch afar off, knowledge and improvement; else, I would not have said any thing on the subject, being unwilling to offend those who think otherwise and take another course.

If the tract I now lay before the public has the good fortune to meet with approbation, I may perhaps hereafter publish my reflexions, discoveries and opinions on other branches of the art of ARCHITECTURE; being willing, as every artist ought, either to communicate what I know, for the bennefit of others, or to give occasion to abler men to rectify my errors.

E R R A T A.

PAGE 5. line 40. for *proportion*, read *proportions*. P. 8. l. 39. for *a*, read *one*. P. 9. l. 4. for *is*, read *its*. Ib. l. 41. for *this*, read *the*. P. 15. l. 21. for *of the pedestal*, read *of pedestals*. P. 20. l. 5. for *appropriated*, read *which they have appropriated*. * P. 29. l. 27. for *relative*, read *relative height*. Ib. l. 40. for *proportinos*, read *proportions*. P. 13. l. 12. for *distinguish*, read *distinguish it*. Ib. l. 13. for *archivoltes*, read *archivoltes*. Ib. l. 25. for *most properly*, read *more proper*. P. 32. l. 7. for *Venetian*, read *Vicentin*. * P. 33. l. 34. for *eleven*, read *twelve*. P. 37. l. 45. in the note, for *given*, read *given by*. P. 45. l. 5. for *require*, read *requires*. P. 57. l. 12. read *I had*. * P. 58. l. 3. for *astragal*, read *astragal of the base*. Ib. l. 4. for *maeks*, read *marks*. * Ib. l. 35. for *fascils*, read *facias*. * L. 7. in the advertisement, for *of six orders*, read *of the six orders*.

N. B. The reader is desired to pay a particular attention to those corrections in the above errata which are marked thus *.

Directions to the Binder.

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AN
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OF
ARCHITECTURE.



E S S A Y

ON THE

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ARCHITECTURE

AN
ESSAY
ON THE
ORDERS
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ARCHITECTURE.

CHAP. I.
INTRODUCTION.

WHEN arts and sciences began to revive in *Italy*, after the long period of barbarism, which had overspread all *Europe*, the minds of the different orders of people were so much given to superstition, that it is no wonder, if those men, whose genius prompted them to the exercise of polite arts, did but barely aim at copying the models left them by the ancients.

ARCHITECTURE being an art, whose productions can hardly be entirely destroyed by the ravages of war; the remains of antiquity in this kind were more numerous and more conspicuous than those of any other, easier to be hidden, transported, or utterly destroyed; and of course, the modern artists had a greater number of patterns and models in ARCHITECTURE than in other arts.

DISPOSED, or rather given, as I said before, to superstition by the religious doctrine of the times; they looked on these remains with a blind admiration, took their dimensions and set down their proportions as invariable rules, without accounting for them in any other manner, than by the authority of their antiquity.

YET there was great variety in those proportions, and this should have indicated to them, that in fact, there were very few positive rules for proportions, and those only
B general;

general; and that the ancients in their works followed only their genius, regulating its dictates by those of reason, nature and propriety.

THIS the moderns could not then perceive. These very differences between the several remains of antiquity, they looked on as the effects of the mystery of architectural laws, which, like those of religion, the human mind was not framed to clear up. All they could do, was to establish a medium and to transmit it down to succeeding ages as a law, which every ARCHITECT must strictly adhere to, if he intends to deserve approbation and excite admiration by his works.

HAD they done this with uniformity, we might, perhaps, be still in the dark, and look on the rules set down for us, as unerring principles and irrefragable laws. But, each writer giving his judgement on the works of the ancients, has laid down rules for proportions on different principles. And this diversity of opinions having its natural effect, when men became more enlightened, we have since been taught to judge of those very works which are pointed out to us as models, in order that we should avoid their defects with as much care as we ought to imitate their beauties; and, consequently, not to adhere blindly to rules that may be defective and of no consequence or necessity in their principle; and, in these times, none will speak of rules and proportions in ARCHITECTURE, as positive laws, but those that understand very little of the matter.

THE best authors, who, of late, have written on this art, have given rather an account of their own method than precepts to others. An able ARCHITECT knows that a structure deserves not his blame, for having columns half a diameter or so, more or less, or the members of the orders disposed otherwise, than he should have made them himself; and he will acknowledge, that, perhaps, on this very account it is worthy of the admiration and praises of the best judges.

IT has been the opinion of some, that no innovations are to be permitted in this art; yet we see they themselves have innovated. They have not, indeed, condemned the orders invented by the ancients, nor have they substituted others in their place; but they have made several alterations in their proportions, and some very material. SCAMMOZZI, who holds the second place among the moderns, will have it, that the proportions of the ancients should not be altered; and, yet, he makes no scruple, when it suits him, to condemn VITRUVIUS himself, the only ancient author we have left in this art; and to settle the proportions according to his own notions of their propriety: he even went further, for he attempted alterations in the form, and the modern *Ionic* capital was first used by him.

THE only positive laws in ARCHITECTURE, are,

To build with solidity and strength.

To unite to these, elegance and lightness; and,

To direct the whole according to propriety.

THE two former points have been strenuously recommended by the best authors and in general observed by the best masters. But the last has been most shamefully neglected, and for that reason will be my chief object; and here I must observe previously that another error in ARCHITECTURE, proceeding from the same cause as the first mentioned, *i. e.* superstition, is still an impediment to the better improvement of this art. We think that the works of the ancients, though not without faults, are yet inimitable in their beauties; and, therefore, we are satisfied with meanly copying them in a very inferior degree.

INDEED, those works are in general well worth our admiration; but why should we only strive to copy? No wonder that they are reckoned inimitable: they always will be so, if we have not spirit enough to attempt at surpassing them.

THE

THE only thing we should imitate in them, and which if we do, will carry us with a proper exertion of abilities, further than the ancients have been, is, their MANNER; which is grand and noble: and, yet, this is almost absolutely neglected, though sometimes aimed at. We mistake their ornaments for their MANNER; and if we do but carve ox-sculls in a *Doric* or any other freeze, we think we have made it in the antique manner.

THIS is pitiful to the last degree. One of the great characteristics of the works of the ancients was propriety; and, certainly, they never carved an ox-scull on the freeze of a palace, a hall, or a basilick; yet, we see such blunders every day.

THIS MANNER may be followed, not only with different ornaments appropriated to our time and the destination of buildings; but even with different orders, if new ones were invented and took the place of those of the ancients.

THIS MANNER consists of uniting with judgement, richness and simplicity, and in disposing ornaments when used, in such order, that they become a strengthening and support to the building: thence the outside of their edifices had generally no other ornaments than columns and entablatures, except such buildings as were erected for decoration, such as triumphal arches, &c. Their walls were not loaded with the unnecessary weight of over-ornamented windows, doors and niches; a happy correspondence and symmetry in the ordonnance of buildings reigned through the whole; all was directed with judgement, and such ornaments as were given to their buildings; were adapted to their nature.

THIS was their MANNER: as to their proportions, they were only general, and such as might keep up the distinctive character of the different orders.

To keep up the distinctive character of the orders, ought certainly to be the study of ARCHITECTS; and this may be done as well, in dissenting somewhat from the proportions of the ancients, as by scrupulously sticking to them: nay, even better, for it does not appear that the ancients had any equal progressive proportions between the different orders in all their parts. The *Ionic* entablature, was lower than both the *Doric* and the *Corinthian*, yet the *Ionic* order was in height a medium between both. All their members were ordered on different principles, which was owing to the different countries where they had been first used.

Now, we have five orders left us by the ancients: we should consider them as one general order, consisting of five modes, which ought to have proper and equal progressive proportions, all grounded on the same fundamental principle.

THEREFORE, the difference between two orders, ought to be, not only some real difference in proportions, but the same differences as between two others.

THIS difference must be, not only an increase or decrease of height, but also a difference in all the members, either in size, number, or form; and all these must bear a relation to the nature of the orders, whether rich or plain, that we may be able to make a proper choice of orders, when we are about employing them; and as others before me thought themselves intitled to make in the proportion established, such alterations as they judged agreeable to reason, I presume, I may give my opinion also, not as rules to others, but as an exposition of my own method.

FOR, there is a method to be observed in all sciences, however arbitrary; and though the great master will be above positive rules, yet he will regulate his works by method, in order to preserve harmony among them. If he did not approve of any mode of ARCHITECTURE in practice before him, he might invent new ways and new orders; but yet he would distinguish them by their different proportions and their distinctive ornaments, which he would fix as a regulator, at least for himself.

THE proportions of the orders, have always been settled by the bigness of the column at bottom, and the diameter taken just above the cincture is the measure by which the whole order is divided.

BUT in order to make it the easier, this measure has been used three different ways, *viz.*

1st. Individually, as the whole diameter, and is called a module.

2dly. Dividually, in two equal parts, each called also a module.

3dly. In three equal parts, which likewise are called modules.

By this it appears, as indeed is the truth, that a module is any undetermined measure, by which the orders of ARCHITECTURE may be measured; but these three being the most commonly used, they are distinguished thus:

The great module, which is the whole diameter.

The *Doric* module, which is a semi-diameter. And,

The little module, which is the third part of the diameter.

AUTHORS who have written on ARCHITECTURE have made use of either of those three. PERRAULT, whom I have followed pretty close when I could approve of his manner, has chosen the last. But before I proceed, I must observe that the diameter is always divided into sixty minutes; consequently the great module contains sixty minutes, the *Doric* module thirty, and the little module twenty.

THIS point settled, I will give my reasons for chusing the little module of twenty minutes for my general measure of orders.

1st. By it I settle without fractions, the height of the column, pedestal and entablature in all the orders.

2dly. By it I settle without fractions, the beginning of diminution in all the orders.

3dly. Where fractions cannot be avoided in the use of this measure, as in the height of bases and capitals, I am under no necessity to make any less fraction than one half.

THIS method, being for the above reasons, easier for the practice, I think it the best I can follow; and therefore, when I shall speak of modules, let it be remembered, that I mean a measure of twenty minutes, being the third part of the diameter of the shaft of the column taken at bottom.

BEFORE I go on, I must here observe for the better intelligence of this work, that PERRAULT, whom, as I said before, I follow very closely, having, for near the same reason as myself, adopted this little module for his measures, he makes the columns of the five orders of the following proportions:

The <i>Tuscan</i> ,	22 modules in height being	$7\frac{1}{3}$ diameter.
The <i>Doric</i> ,	24	8
The <i>Ionic</i> ,	26	$8\frac{2}{3}$
The <i>Corinthian</i> ,	28	$9\frac{1}{3}$
The <i>Composite</i> ,	30	10

By which the reader may see an equal progression of two modules between each of the five orders, for the column only; and the same progression I have observed, though my proportions are different. But, before I give them, I must in the next chapter discuss the reasons that have induced me to make any alteration in these proportions of PERRAULT, which I might have followed, if I was not satisfied with those of any other author.

C H A P. II.

Of the alterations proposed in the proportions of the orders.

THOUGH ARCHITECTS are not tied down by positive rules, for the ordonnance of the proportions of the orders; yet, I own, that it would be a ridiculous attempt in me, to deviate from the principles of those who went before me, for no other reason than that of the right I think I have to do it. Therefore I shall expose my motives, previous to my entering on the description of those alterations.

FIRST, ARCHITECTURE is poor on one side, and over rich on the other. The low orders, are plain orders; among the high ones, there are two of nearly the same dimensions, very much ornamented, and which at a little distance will appear, especially to those who are not perfectly acquainted with their difference, as one and the same order.

To the first assertion it will be answered, that the *Doric* order, one of the low orders, is capable of being made very rich, by a fluted shaft, carved mouldings on the capital, and fine relievos on the freeze. All this is very true, but does not overthrow my allegation, for where propriety forbids these extra enrichments, where it bespeaks a plain order; yet, it might require a rich one: rich in its plainest form and its constitutal ornaments, and not in the accessory ones.

As to the same, which almost confounds together the two richest orders, I believe no body will dispute it, except it be for the sake of disputing; their height is so nearly equal, that it has not been settled which of the two should be highest: PALLADIO gives the greater height to the *Composite*; SCAMMOZZI to the *Corinthian*, and so on, down to us, opinions are different on this point. Two high orders of almost equal beauty and hardly distinguishable from each other by the form of their ornaments, are of very little service. Make one of these much lower than the other, and you certainly will enrich ARCHITECTURE, without increasing the number of orders, and by only distributing with a just proportion between high and low its own stock of riches.

SECONDLY, The *Composite* order seems to have been intended for a lower stature than that which has been given to it. I say, *seems to have been intended*, though we know it never was intended so.

WHEN the *Romans*, first made a *Composite* column*, they certainly intended it, as an improvement of the *Corinthian* order, and not as an order of itself, for they made it of the same general proportions, they gave it the *Corinthian* base and the *Corinthian* entablature, and all ARCHITECTS always were of opinion, that single alterations in the forms of the ornaments, were not sufficient to make a different order, but that the distinction consisted chiefly in the difference of proportions. In this intended improvement, however, the *Romans* missed their aim. The *Corinthian* capital being the invention of nature herself, who taught CALLIMACHUS how to make it, had, on that very account, a great advantage over every compound of different ornaments not adapted to each other. But its superior beauty and elegance, has, with just reason, always given to that

* The *Composite* order was first made use of in the arch of *Titus*, where it answers the description I give of it.
order

order the first place for richness, if not constantly for height; and I believe every attempt to out-do it in that point will always prove abortive.

THE *Composite* capital, which is made of the *Ionic's* and of two rows of leaves in the *Corinthian*, far from surpassing this last in elegance and delicacy, has in it a clumsiness which ill suits the height the *Romans* gave to the column that supports it; for, when by its appearance they saw it could not be termed an improved *Corinthian*, they then made it a separate order, and some ARCHITECTS gave it a shaft a little higher than the *Corinthian* had in general, others made it a little lower, and the succeeding ARCHITECTS have adopted which of the two ways they thought best.

THIS heavy character of the *Composite* capital, denotes, of course, that, though not intended at first for a low order, yet propriety and reason confine it there, since a short squattish shaft, is fitter to support this heavy capital than a tall slender one; and my opinion in this respect is further supported by the massyness of the entablature all ARCHITECTS in general, give to this order, as will be seen when I treat of entablature.

A THIRD reason, which, however, I own has little merit, besides a speciousness that will give it weight in the eyes of those only, who delight in an over scrupulous exactness, is, that this order, as it now is executed, cannot properly bear the name of *Composite*, for its capital only is composed, the rest is either a new invented shaft, entablature, &c. or borrowed from the other orders, and thereby takes off the distinction of proportions which can only make a distinct order. Could not the inventors or rather compositors of this order, have found a way to make it an entirely composed column, and, yet, a column of different and distinct proportions with those of the other orders? No, they could not do it, or rather find it out, howsoever obvious. This discovery was left to me, and I will not withhold it from the world.

FOURTHLY, And a better reason I think this will be found than the last; the mode of our buildings being different from that of the ancients, may require the alteration of that order from high to low.

WHEN the ancients erected buildings which required more than one order in their height, they began by the lowest order and successively to the highest; so that the *Corinthian* order when employed in such buildings, was always at the top of the edifice, as for instance in the *Coliseum* built of four stories and three orders, viz. The *Doric*, the *Ionic* and the *Corinthian* repeated, and it became an inviolable law*, to follow this method; SCAMMOZZI goes even further, for he blames a *Græcian* ARCHITECT for placing in a temple of MINERVA built of two orders, the *Corinthian* over the *Doric*, and he would have them placed according to their rank, either *Doric* or *Ionic*, or *Ionic* and *Corinthian*. Our buildings require generally a different ordonnance. In churches the richest and highest order should be directly on the pavement. In palaces it must be otherwise, the finest order employed must be on a level with the state apartments which are always elevated a story above-ground, and these state apartments must be of higher dimensions than those below, which are in general, offices, private, and officers apartments; and it would be absurd and a great impropriety not to make these plainly appear a basement to the principal story erected above, which must shew by the magnificence of its outside, that it is destined in the inside to be the residence of its owner. In a royal palace, the *Corinthian* order ought to be placed here. Underneath, something must be made not

* I shall in the course of this work examine the foundation of this inviolable law, to find whether it is really an infallible and necessary method.

equal in elegance, but adequate to its richness; a *Rustic* basement story is often, especially here in *England*, placed under the *Corinthian* order. A more preposterous impropriety cannot be committed. The *Rustic* order, as some will call it, deserves nothing less than the name of order, for in its very origin it was a state of *disorder*, being only found in antique buildings, as an unfinished part of them, either to spare expence or for want of time.

THE ancients, in erecting their buildings, laid their stones rough, on the outward side, as dug out of the quarry, in order to join them closer together without breaking the sharp edge of their corners; and they used to have them cut smooth and even afterwards so that the building appeared as one flat stone, the joints not being perceivable; but they never cut stone to give a *Rustic* appearance to the buildings. The practice of it is not only against nature, and a pitiful imitation of the imperfection of some works of antiquity, but it is also a superfluous and imprudent increase of weight; for these *Rustic* stones, either cut smooth in tables or picked in holes as if they were worm-eaten, have a projection beyond the part that supports the building which hangs upon it; and supposing this projection to be but half an inch, a surface of twenty-four feet in length and twelve in breadth, will make one foot cube, which either brick or quarry stone, will weigh above a hundred weight, by which every person of judgment will see that it is to the last degree ridiculous to load the walls of an elegant building with these useless projections.

I own it looks well enough in bridges, prisons, fortresses, water-gates, &c. but in that case, it must be the unfinished and natural *Rustic* of the ancients, stones laid as they came from the quarry, and not rusticated by labour*, which is a solecism in the art.

Rustic, should therefore, be confined to those works which must shew great strength; and it is certainly unfit for the palace of a prince, the seat of a nobleman or even the mansion of a private gentleman, unless we employ it in its natural character for the cellars or offices built below the level of the ground, and surrounded with a fosse, moat or area.

BUT to return. A basement story above ground, should never be rusticated, whether the building has columns or not: under columns, an inferior order should adorn and support the basement. The *Tuscan* is much too heavy unless set under the *Doric*, this last does well under the *Ionic*, but is not rich enough to accompany the *Corinthian*.

THE same objection may be made to the *Ionic*, which besides is too slender and delicate to be made a basement of; for in fact, this is the most delicate of all orders, on account of the length of its shaft which is higher than even the *Corinthian*, and of the smallness of its capital, whose abacus has the least projection of all: none remains but the *Composite*, which by the shape and richness of its capital, shews more strength and a beauty but little inferior to the *Corinthian's*, and invites us to place it under this as a proper and adequate support. But it is too high, and those who even made it lower than the *Corinthian*, have left so little difference between these two in their proportions, that at some distance they will appear as the same order repeated.

THESE reasons of improvement and propriety invited me at first, to try what could be done with this *Composite* order; and if by reducing it to a proper height, it would lose any of its beauties. But with pleasure I found, that the shortening of this column gave it an increase of solidity, boldness and elegance.

* The beautiful bridge at *Black-fryars*, is built in that manner; the stones of the naked of the bridge are laid without having been planed by the chissel.

THAT it is more solid when shorter, in proportion to its diameter, requires no argument to demonstrate, and plain reason will tell us, that its capital heavier in its form than the *Corinthian's*, will look more firmly settled, if standing on a short column than a high one.

THAT it appears bolder than when made higher, is the effect of the lesser length in the diminished part of the column, and consequently of the greater diminution it shews, though there is no more in reality: a column of nine and a half or ten diameter high, diminished from its third part to the top, of seven and a half or eight minutes, will seem to be near of the same size all the way up; in a lower order this diminution strikes the eye and gives it a bolder look. This happily blended in the altered *Composite* with a solidity better adapted to the form of the capital will certainly make it more elegant and majestic than ever it was; and of the truth of this, I leave the judgment to any judicious observer, that will compare my *Composite* column, with any other of that order, as made heretofore.

HAVING given my most material reasons for reducing this order, I shall proceed to explain how I make it a complete *Composite* column; composed in all its parts from the *Grecian* orders, instead of being only composed in its capital, from the *Ionic* and *Corinthian*, and I make it thus:

1st. Its base is the original *Attic* base, reckoned, with just reason as I shall demonstrate in the chapter of bases, the best the ancients invented, and well adapted to the proportions I give to this order.

2dly. Its shaft is the *Doric* shaft which reduces it to my proportions, gives it in my judgment that advantage over the former *Composite* I have already pointed out, and preserves the distinction of orders by different proportions with the *Doric*, since the capital being two modules higher than in the *Doric* order, it makes the column according to the progressive increase I give them, a distinct order between the *Doric* and *Ionic*.

3dly. Its capital is the same as composed by the *Romans* from the *Ionic* and *Corinthian*.

THIS will, indeed, be a *Composite* column, composed from the three *Grecian* orders, and, yet, a very distinct order from them, both by its proprieties and proportions, which will be shewn in its place.

As to the alterations I have made in the proportions of the other orders, they are very immaterial in themselves, each order considered separately; but, they were necessary, to keep an equal progression between the five orders considered together as a general order. They will be sufficiently described and accounted for in the succeeding chapters, which will shew, first, the general proportions I give to the five orders; and, next, the particular dimensions and proportions of each of their members.

C H A P. III.

Of the general Proportions given to the five Orders.

THE ancient ARCHITECTS, whose works are still the objects of our deserved admiration, knew very little, I believe, of those proportions prescribed since by VITRUVIUS and others for the dimensions of columns. They had a general idea of those proportions, which are the proper characteristic of the different orders, but were not tied to any particular rules. They had no instrument, whereupon, without knowing how it was executed, they could find the height, breadth, projection, &c. of all the members with the most minute exactness. Their works were planned by their genius, and were directed with a judicious enquiry into proprieties, and though they were almost all different in their proportions, yet they were almost all equally beautiful and worthy of praise.

INDEED, I think, those that allow themselves the liberty of following rather their genius than the rules of their masters, are the likeliest to illustrate themselves by admirable productions. Why should we submit to this or that author's rules and precepts? But he was the greatest genius, will be the answer. So he might, and I have not vanity enough to think myself his equal; but, though of less abilities, I ought naturally to possess superior knowledge, since I may add to his discoveries, those they have enabled me to make.

THUS every artist should reason, as it is the only way to carry arts and sciences to a higher pitch than we find them; and, if we do but ascend one step towards the summit of the high mountain of perfection, we cannot be said to have lived in vain.

THOUGH, by this doctrine, it seems I would infer that rules ought not to be prescribed; yet, I do not mean, that we should extravagantly run out of the character of things: there are general proportions grounded on nature and the origin of the orders, and these I strictly adhere to; I do more, I prescribe myself rules for the sake of method and harmony in my works, and so should every ARCHITECT, after duly considering the matter, set down rules for his practice, and the directions of the workmen he employs: rules, from which, if well calculated, he ought not to depart in any of his works. By this, there will be a happy correspondence in all his productions, howsoever remote from each other; and the beholder, if a judge, will read his name in the measure of any one of his columns.

HAVING, therefore, scrupulously weighed, and compared the proportions I give to the orders, with those of several other authors, I think myself intitled to abide by them, and to offer them to such as may approve of them.

THE progressive increase which I give to the orders, is three modules, being a whole diameter to every order; so that the difference between the lowest and highest order, is twelve modules or four diameters.

THIS difference of three modules from order to order, I distribute thus, one module to the pedestal and two modules to the column: as to the entablatures, I make them after PERRAULT, all of the same height, which is six modules or two diameters. The reason of this is, that in point of height, entablatures are quite the reverse of columns:

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in these, the higher they are made (in proportion to their diameter) the more delicate and slender they will appear; but, in entablatures, those will appear heaviest which are the highest, in proportion of the columns. Therefore, in giving the same entablature to a low as I give to a high order, a reasonable proportion is kept, since six modules will be in the lowest order, about a fifth of the whole order, and in the highest, only about a seventh of the whole order, pedestal included.

THE plate I give here of the five orders and the following table will shew the general proportions I have assigned to each.

TABLE of the general proportions of the five orders.

	Height of pedestals.	Of columns.	Of entablatures.	Of the whole orders.
<i>Tuscan</i> ,	5 modules.	21 modules.	6 modules.	32 modules.
<i>Doric</i> ,	6	23	6	35
<i>Composite</i> ,	7	25	6	38
<i>Ionic</i> ,	8	27	6	41
<i>Corinthian</i> ,	9	29	6	44

By these proportions, it may be seen, that except in the *Composite* order, with which I have indeed made free, though not as I think without sufficient reasons; I have not stepped out of the common path.

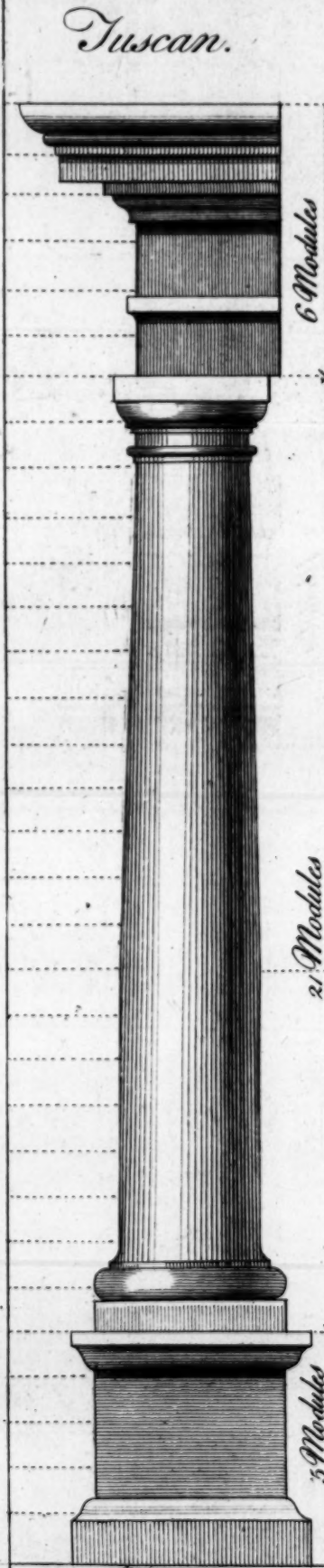
THE only entire *Tuscan* column, that remains of the ancient's works, is the *TRAJAN* column. This, on account of its colossal dimensions, and of its particular purpose, may be said not to be a proper model; it has eight diameters and a half in height, including (as I always do when I speak of a column) its base and capital. *VITRUVIUS*, in whole time there certainly must have existed several remains of this order, makes it but seven diameters; *PALLADIO*, makes it of the same height; *SCAMMOZZI*, gives it seven and a half; *SERLIO*, only six; *VIGNOLA*, seven, and *PERRAULT*, seven and a third.

GREATER variations are found in the height of the *Doric* column; *VITRUVIUS* makes it seven and seven diameters and a half without base; in the *Coliseum* it has nine and a half with a base; *PALLADIO* gives it eight and two thirds; *SCAMMOZZI*, eight and a half; *VIGNOLA* and *PERRAULT* eight. The height I give to this column is a medium between *VITRUVIUS*'s two proportions, allowance being made for the base.

THE *Ionic* column in the *Coliseum*, the theatre of *MARCELLUS*, and, according to *VITRUVIUS*, *PALLADIO*, *SERLIO* and *PERRAULT*, is eight diameters and two thirds; in the temple of *Fortuna Virilis* it is nine, which dimension I have adopted, and *SCAMMOZZI* makes it eight and three quarters.

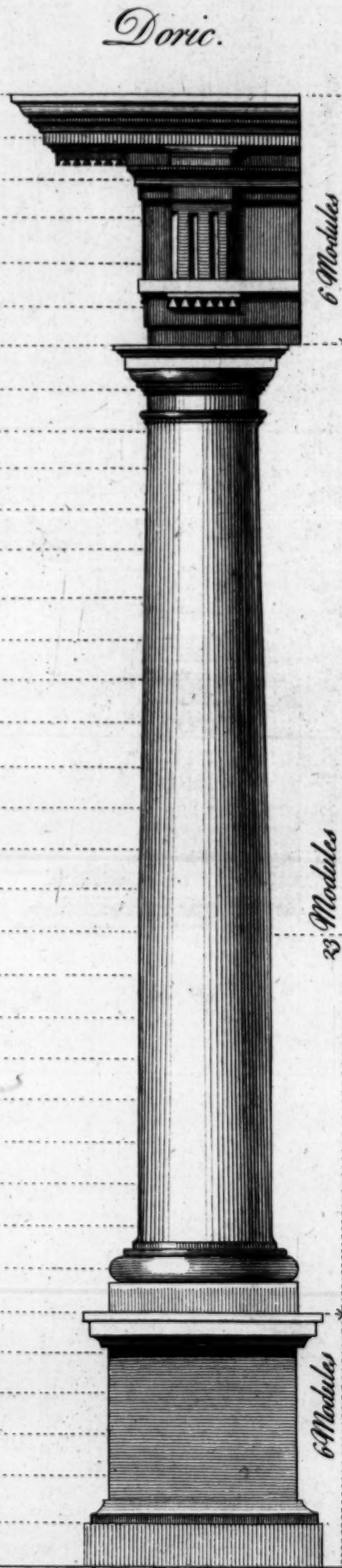
THE *Corinthian* runs in the antique, from eight and a half to a little more than ten diameters; *VITRUVIUS* and *PALLADIO* make it nine and a half, *SCAMMOZZI* ten, *SERLIO* nine, and *PERRAULT* nine and one third.

A CHOICE must be made amongst all these different proportions; I was regulated in mine, by the relative proportion I intend to keep in the whole, by means of an equal progression.



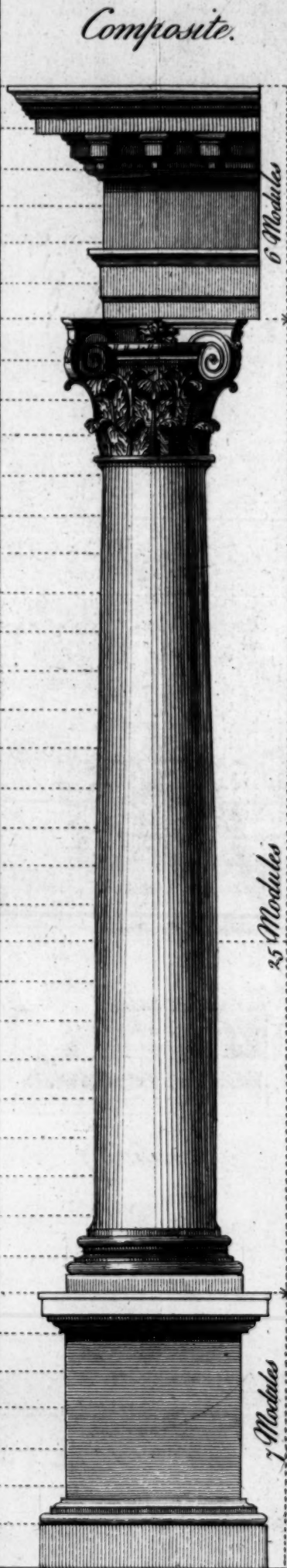
Tuscan.

Toscan.



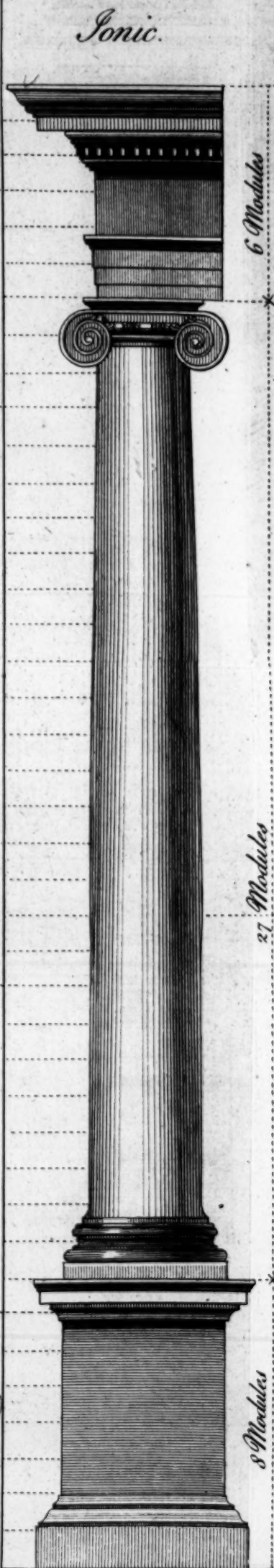
Doric.

Dorique.



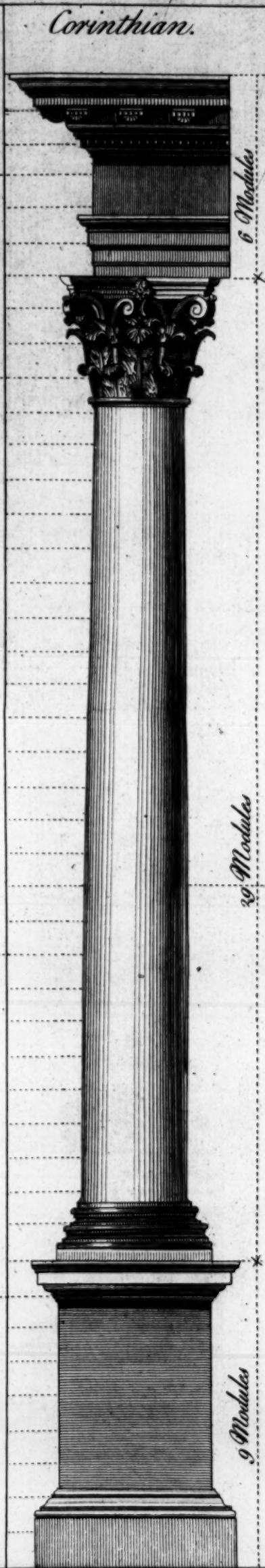
Composite.

Composite.



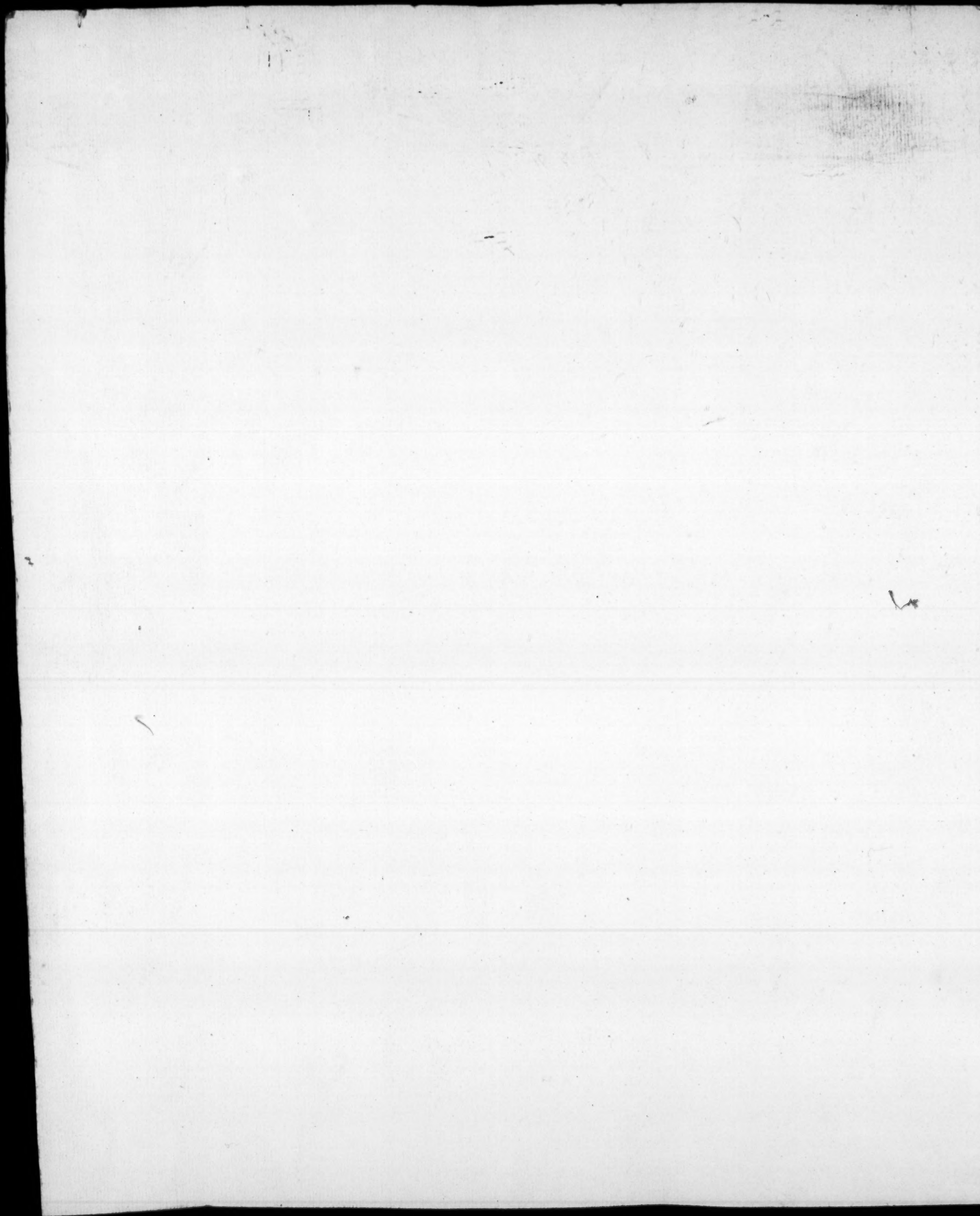
Ionic.

Ionique.



Corinthian.

Corinthien.



C H A P. IV.

Of Pedestals.

SOME ARCHITECTS, blame the use of pedestals in general; they call it unnatural, and a miserable lengthening of columns that are too short.

AN improper use of them, is, indeed, blameable; there are places and situations where pedestals should by no means support the columns, but, there are also places and situations where they cannot appear to advantage unless raised upon pedestals. We should not condemn entirely the use of any thing, because in some cases it has a bad effect and is improper.

THE ancients have left us among the remains we have of their works, several instances of the propriety of the use of pedestals: a continued pedestal round a temple terminating in the front, in two single pedestals on each sides of the steps, has certainly a very fine effect, of which the temple of *Fortuna Virilis* and several others are evident proofs. Pedestals have not only a fine effect in this case, they are also sometimes necessary: columns should stand even with the floor of the temple, consequently if on account of situation or for the sake of prospect, they are raised and an ascent made to them by steps, a continued pedestal becomes necessary. Single pedestals, have also their proper places; in general, columns within apartments should always stand on pedestals, for two reasons. One is that they are better seen from the bottom to the top by being brought nearer the level of the eye; and no part of them will be hidden by tables, chairs, &c. the other and principal reason is that when raised on pedestals, the columns are so much the shorter and of a lesser diameter, and consequently will not fill so much room nor obstruct the view so much, as if bigger.

ON the outsides of buildings the case is very different; and, as I observed before, columns should stand on the level of the floor or pavement, pedestals except continued cannot be eligible on account of the heavy aspect they have of themselves, and of being an obstruction to doors and windows, which must always be placed above the level of pedestals, and of course would be too high; except in the case where arcades are made between columns, and even then pedestals are not proper, since they look indeed as a lengthening of columns made too short, which if longer and standing on the pavement or a basement would have a nobler aspect. In short the use of pedestals is absolutely improper, when they are not introduced by necessity, or when they do not contribute to make the order appear to greater advantage.

THERE was no real necessity, for a pedestal either to the *TRAJAN* column in *Rome*, or to the monumental *Doric* column in *London*, yet it must be owned that they add a great deal to the majesty and grandeur of those noble pillars.

VARIOUS were the proportions of the ancients for this part of the orders. Some regulated it by the measure of the openings between, others by the height of the columns; some gave them a third part, others a fourth of the column. But, I think, the method of giving them a progressive increase from order to order as to the column, is by far the

best; since, by that means, they are properly adapted to the orders they belong to, and become a distinctive part of them. And it must be acknowledged, that if we give to all the members of the orders a distinct character, demonstrating, independantly of the whole, to what order they belong, it will be an improvement upon the ancients, who were very irregular in this point; and I will shew in the course of this work, that I have observed this method with an exactness that few ARCHITECTS have submitted to.

THE easy, plain and methodical way of proceeding in the progressive proportions of PERRAULT, has made me follow his manner, if not always approve of his proportions: He generally settles them by taking a medium between the different opinions of others; but I think he should have made some allowance for their greater or inferior abilities. I do not believe SERLIO and VIGNOLA to be comparable to PALLADIO and even to SCAMMOZZI, much less to our great masters the ancients. It is not enough, besides, to take the medium of opinions, were all authors reckoned of equal abilities, we should also weigh them, in order to give the preference where it is deserved, or to reject the whole if defective.

PERRAULT, according to this method, has made his pedestals with a progressive increase of one module in each order, as I make them; but he begins at six modules, and ends at ten, and I think his pedestals are something too high for the other proportion he gives to the orders. Therefore, I have taken only two, exactly from his, viz. the *Ionic* and *Corinthian* as I make these two columns one module higher than he does: but as to the other orders, my columns being shorter than his, his pedestals, already too high for his proportions, could still less suit mine.

THE pedestal of the TRAJAN column, which is of the *Tuscan* order, is but seventy seven minutes high; PALLADIO makes his only sixty, SCAMMOZZI the greatest lover of odd and difficult numbers I ever knew of, gives it one hundred twelve and a half, SERLIO* one hundred thirty five, VIGNOLA one hundred and fifty, PERRAULT one hundred and twenty.

THE TRAJAN pedestal, is, I think, much too low for a common size column; as to PALLADIO's it is only a plain block without cornice or base, and should rather be termed a socle than a pedestal: he was sensible this order could not admit of a high pedestal and he hardly gave it any. All the others are in my opinion, too high; and I must refer the reader to the plate, where if he sees with eyes like mine, he will be convinced that my pedestal of one hundred minutes being five modules, bears a good proportion to the whole order.

PALLADIO did not think of establishing proportions between the orders, he considered them separately and not as one general system: his pedestal for the *Doric* column has more than twice the height of the *Tuscan's*, he makes it one hundred and forty minutes, which is, I think, preposterous; SCAMMOZZI gives his one hundred twenty-eight minutes and his *Doric* column is higher than mine; I give therefore one hundred and twenty minutes to my pedestal.

HAVING made the *Composite* column from four to five modules lower than it has been made by others, it would have been a gross error not to have lowered its pedestal in the same proportion; I make it therefore seven modules only, by which it rises above those of the lower orders in the same gradual progression I have observed in them.

* In his own terms, two modules (of sixty minutes each) less one eighth.

I HAVE taken, as I said before, PERRAULT's pedestals for the *Ionic* and *Corinthian* orders as suiting my proportion for those orders better than those he gives them, the *Ionic's* is eight modules and the *Corinthian's* nine.

I HAVE ordered the several members of the pedestals for the five orders in almost the same manner as PERRAULT but I shall explain them by a shorter and easier calculation.

I DIVIDE the height of the pedestal in eight equal parts; two are for its base, five for the trunk or die and one for the cornice: the two parts given to the base are to be divided in three equal parts, two of which for the plinth or socle and the third for the mouldings. These divisions are the same for all the orders.

As the pedestals rise in height, progressively in each order, so does the number of their mouldings increase gradually, according to the following table.

TABLE shewing the number of mouldings given to the pedestals of the five orders.

	Mouldings in the base.	Ditto in the cornice.
<i>Tuscan,</i>	1	2
<i>Doric,</i>	2	3
<i>Composite,</i>	3	4
<i>Ionic,</i>	4	5
<i>Corinthian,</i>	5	6

THE manner of ordering these mouldings, and their projection, is what remains to be explained.

THE bases of the pedestal having been divided into three parts, two of which are for the socle and the other for the mouldings, there needs no further division in the *Tuscan* order, which has there but one moulding viz. an inverted *Cimatium* whose projection as well as the socle's, is nine minutes on each side beyond the die, which must be in all the orders of the same breadth with the plinth of the base of the column, viz. eighty four minutes.

IN the *Doric* order, the socle projects ten minutes and the part allowed for the mouldings being divided into three, one part will be for a listell and the other two for a cavetto over it and the projection of both is eight minutes.

IN the *Composite*, the socle projects eleven minutes; the moulding part being divided into fourteen, seven are given to a torus of equal projection with the socle, two to a fillet of seven minutes projection and five to an inverted ogee that projects six minutes.

IN the *Ionic*, the socle has twelve minutes projection; one eighth of the moulding part is for a listell projecting eleven minutes, four eighths to an inverted *Cimatium* of the same projection, one to a fillet and two to a cavetto; these two last members having both four minutes projection.

IN the *Corinthian* order, the socle projects thirteen minutes; and after dividing the moulding part into eighteen parts, five are for a torus of the same projection with the socle, one for a listell, six for an inverted *Cimatium* these two of ten minutes projection, two of these parts are for a fillet of four minutes projection, and four for an inverted ogee that projects only three minutes.

THE eighth part of the pedestal, given to the cornice, is to be divided thus:

In the <i>Tuscan</i> order in	7	In the <i>Ionic</i> in	10
<i>Doric,</i>	8	<i>Corinthian</i>	11
<i>Composite,</i>	9		
	} parts.		} parts.

Two

Two sevenths in the *Tuscan* order, are for a listell, and five for a *Cimatium*, both of ten minutes projection.

ONE eighth in the *Doric* I give to a listell of twelve minutes projection, four eighths to the corona or drip which (as it must always project beyond the socle) has eleven minutes projection, and three eighths to a cavetto projecting eight minutes.

ONE ninth in the *Composite* is for the listell of fourteen minutes projection, five for the corona of twelve minutes, one to a fillet eight minutes, and two to an ogee of five minutes.

ONE tenth in the *Ionic*, to the listell of sixteen minutes projection, two to an ogee of fifteen, four to the corona of thirteen, one to a fillet, and two to a cavetto, these two last of six minutes projection.

IN the *Corinthian* order, one eleventh to a listell of eighteen minutes, two to an ogee of seventeen, three to the corona of fourteen, three to an ovolo of ten, half an eleventh to a fillet of five, and the remaining one and a half to an ogee of four minutes projection.

By the foregoing distribution, the progressive increase is exactly observed, not only in the size of the members, but even in their number and their projection.

C H A P. V.

Of the Bases of Columns.

ORIGINALLY, columns had no bases; they stood on the ground or on any other flat basement, and the cincture was the only projection they had at bottom. The first base that was made, and which VITRUVIUS has described, was given to the *Ionic* and *Corinthian* orders; and it became a characteristic of the *Doric* order to have no base.

THE moderns have applied this base, described by VITRUVIUS, solely to the *Ionic* order, and have given to the *Corinthian* another base invented for that order by the ancient ARCHITECTS that came immediately after VITRUVIUS, and which has ever since been called the *Corinthian* base, as the other the *Ionic*.

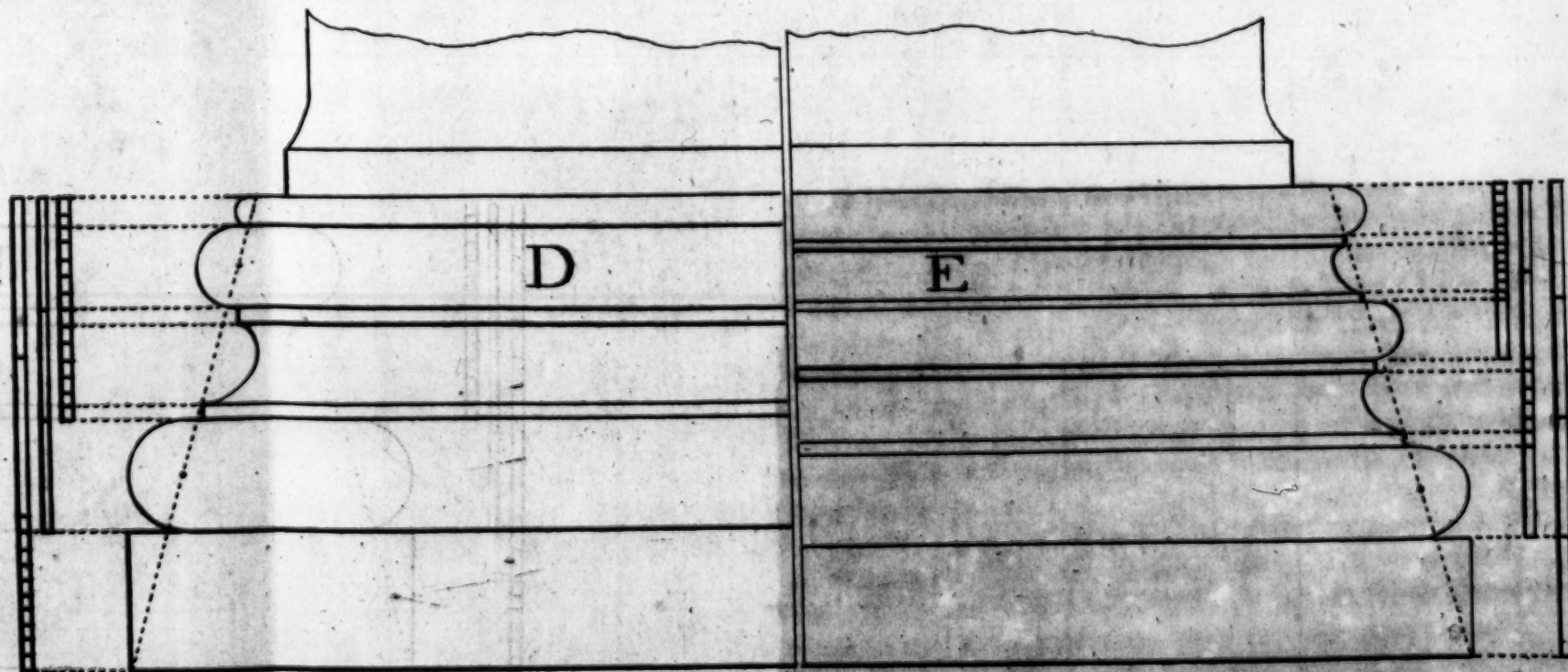
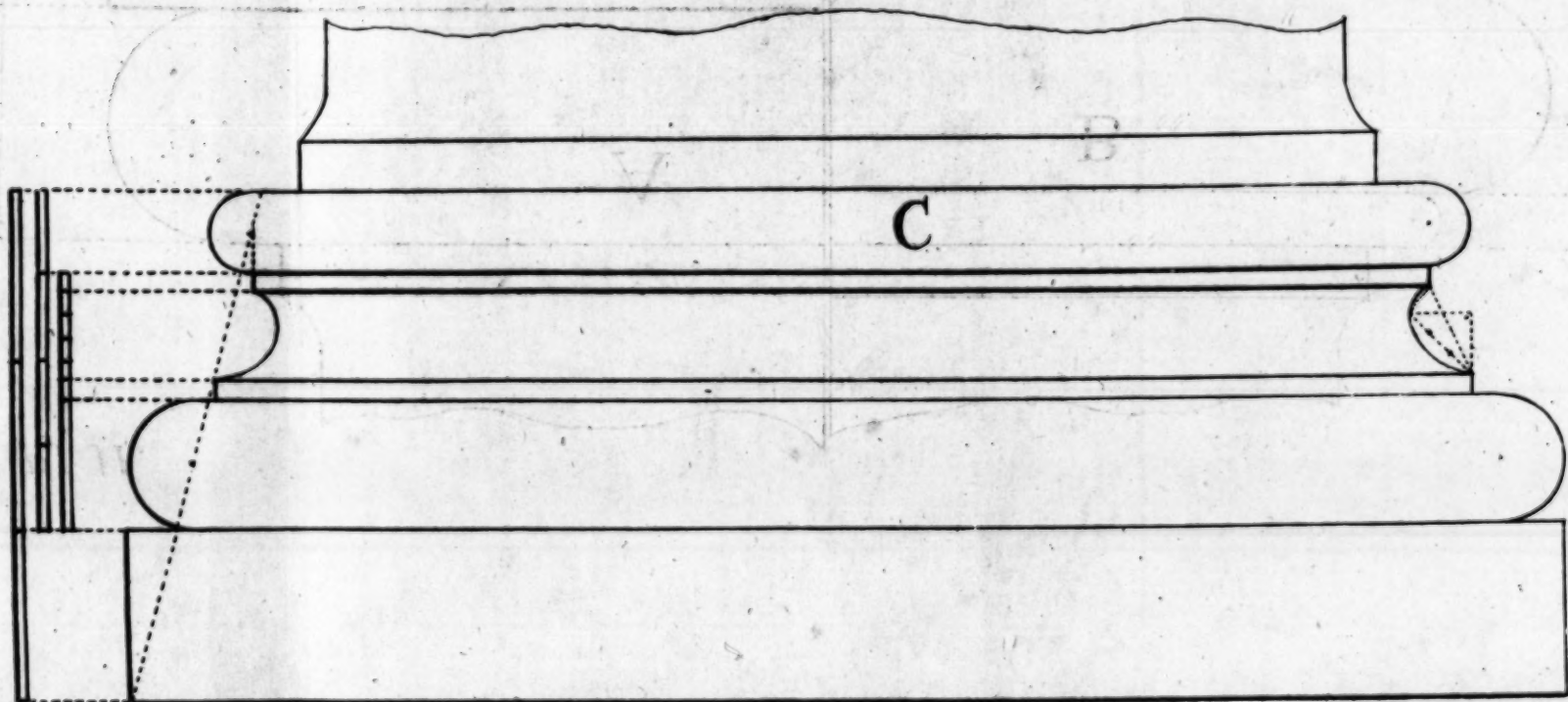
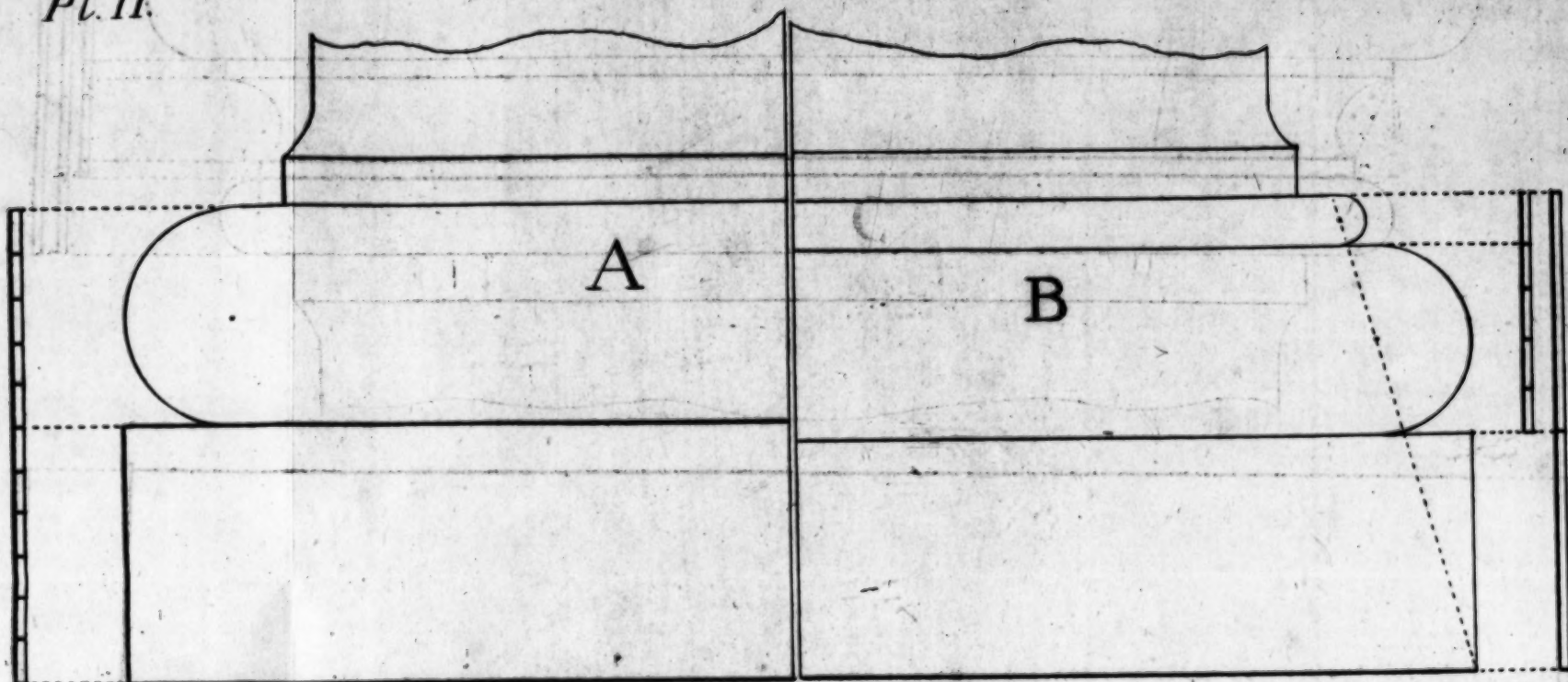
THESE two bases have not met with universal approbation: the *Ionic's* especially has given great disgust even to the ancients, who made use of it so very seldom, that it is not to be found in any of the antique remains of that order; and they substituted in its place another, called the *Attic* base, of which more by and by.

IT is not without great reason that the *Ionic* base has been condemned, for it is so monstrously ordained, that it looks as if it turned bottom upwards, having its thickest and widest member at top, mounted upon several small members, seemingly pressing upon each other as if squeezed into confusion by such weight.

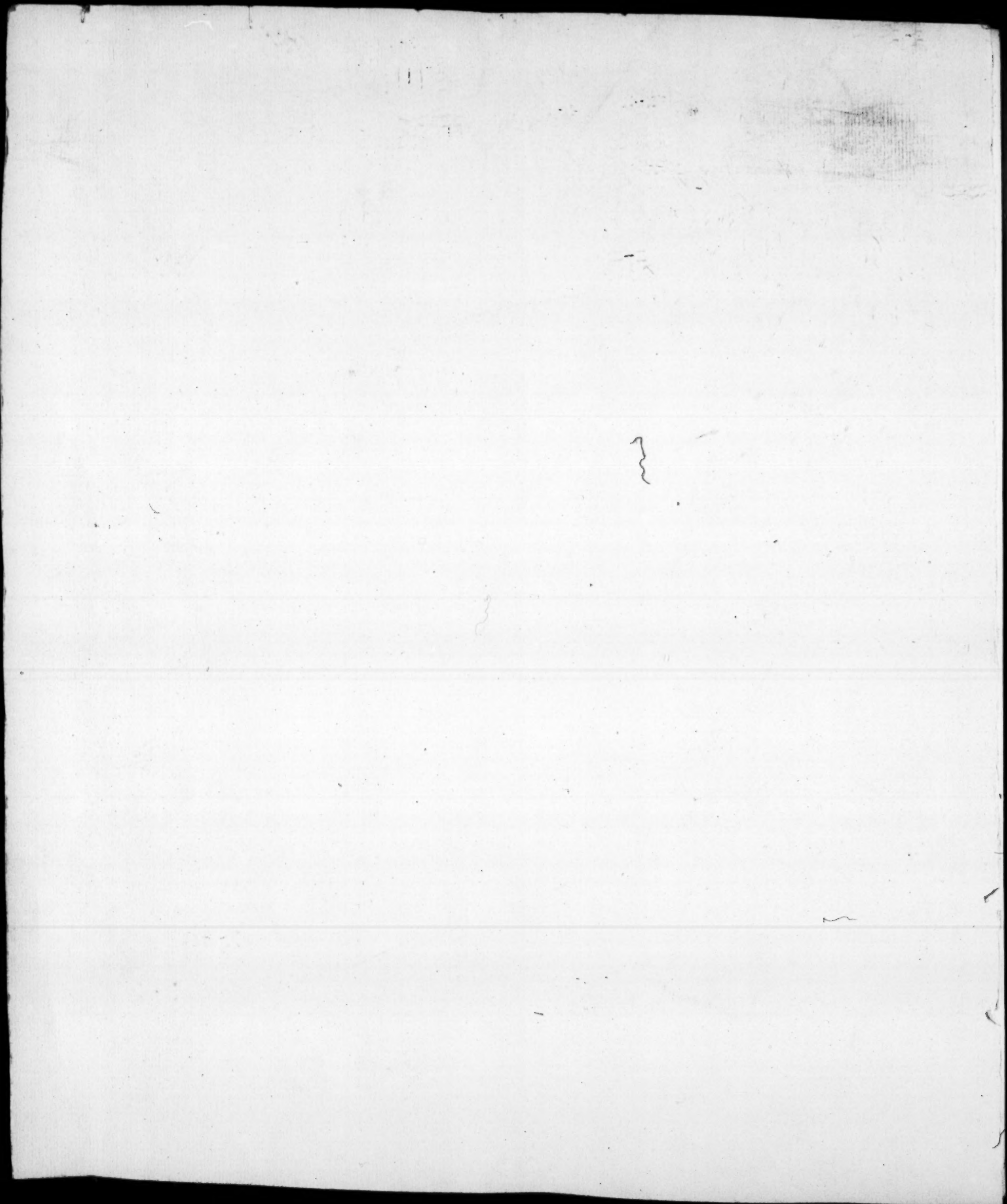
THE *Corinthian* base, though not so badly made, has yet been found very defective; its middle parts being too weak, for want of a proper intermixture of large and small members; and, for that reason, the *Attic* base was also very often used in its place.

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THIS last was justly esteemed by the ancients the best of the three; and, indeed, it was much superior to the two others, as in its composition a judicious regard was paid to propriety, solidity, and elegance.

THE ancients, as I said before, applied it often both to the *Ionic* and *Corinthian* orders.

WE find it in the temple of *Fortuna Virilis*, the theatre of MARCELLUS, and the baths of DIOCLETIAN, given to the *Ionic* order, and to the *Corinthian*, in the temples of VESTA, now St. Stephen's, of *Castor* and *Pollux* at Naples, and of *Sesfi* in *Umbria*; it is also in several other temples and buildings given to this order, with the addition of sometimes a single fillet, and sometimes also one or more astragals.

THE moderns have appropriated it in general to the *Doric* order. BRAMANTE, the first restorer of the ancient mode of ARCHITECTURE, gave this base to the *Doric* order in the church of St. PETER of the Mountain; and, after him PALLADIO, SCAMMOZZI, and almost all the moderns give it as the proper *Doric* base.

IN the *Ionic* order, PALLADIO and SCAMMOZZI use it with the addition of a very visible astragal at top; and in the *Corinthian* they intermix it with three astragals, so small as not to be perceived at some distance, whence it appears, the plain *Attic* base: BARBARO, gives it to this order without any alteration, and SCAMMOZZI to the *Composite* with the addition of two astragals.

IN short, this base has been given to all orders, for I have seen it even under *Tuscan* columns.

BUT without finding fault with those great masters, I think I may, in my own practice, act on different principles for the following reasons:

I THINK this base, beautiful as it is, too massy and too heavy for the elegance of the *Corinthian* order, and the delicacy of the *Ionic*; and, on the other side, I look on it as too delicate for the plain and substantial *Tuscan*, and too rich for the *Doric* order.

BESIDES, it is necessary I should give to each order a particular and distinct base, with a gradual increase of mouldings and richness, from the plainest to the richest order, else, it would not be keeping my promise, to give to each part of the orders progressive proportions and a distinctive character.

I HAVE, therefore, chosen or composed five bases, of which I give here the description, and a plate of their profile.

TO the *Tuscan* order I give a base, consisting only of the plinth and a torus, after the manner of SCAMMOZZI, which I prefer to that of VITRUVIUS.

THE difference between these two authors, is, that VITRUVIUS includes the cincture of the shaft in the semi diameter given for the height of all bases; and SCAMMOZZI makes his base of the ordinary height, exclusive of the cincture.

MY reasons for this preference are:

1st. The cincture is with reason considered as making part of the shaft, since it represents the iron-hoops with which the first columns that were erected (being trunks of trees) were bound both at bottom and top, in order to prevent their splitting; and when columns had no base, yet there was a cincture at the bottom of the shaft*.

* Some exception may be made to what I say here, that columns had a cincture when they had no base: there are some instances of columns without it. The sepulchre, discovered near *Terracina* by *Ligorio*, is one: the use of iron hoops is not certainly so ancient as that of columns; but, it must have been the first improvement, and the first addition to the plain trunks of trees.

2dly. As in the other orders the cincture is kept above the height given to the base; I think necessary, for uniformity's sake, to keep it so likewise in this.

3dly. VITRUVIUS's base, is, to my judgement rather too flat, and looks as if sunk below its natural level by the weight of the columns; which is certainly a fault of impropriety, since, supporting members must always appear to the eyes, strong enough to bear the weight of the members supported.

As to the proportions and ordonnance of this base, which is delineated on the plate at [fig. A.] I have not taken the trouble of measuring SCAMMOZZI's; and his own account of all his proportions is so diffuse, that I chose to ordain it my own way: I divided the height of the base into eleven parts, and gave six to the *Plinth* and five to the *Torus*.

A CERTAIN *French* author is very angry with the modern ARCHITECTS, for presuming to give a base to the *Doric* order, against the will and consent of all antiquity; and, because, forsooth, HERCULES did not use to wear shoes but walked bare-footed, he holds it a high misdemeanor in ARCHITECTURE, to give a base to this order, which was compared by the ancients to HERCULES, on account of its superior strength and solidity*. Let that be as it will, I am certain, that was HERCULES himself to come again into the world, and to visit our regions, he must either submit to the fashion of wearing shoes, or be passed like a beggar to his parish; and, for that very reason, I think it would not be doing unto others as we would be done by; to dress his likeness otherwise than that of a gentleman.

BUT to be serious. The moderns have not taken upon themselves to give a base to the *Doric* order without a precedent in antiquity, since this order in the *Coliseum* has a base; but was there no such precedent, I do not see why this order should remain thus unimproved. As to the comparisons made, of the *Doric* column to HERCULES, of the *Ionic* to a grave matron and of the *Corinthian* to virginal beauty, &c. those frivolous flourishes might pass with the ancients as agreeable to their rhetoric; but we all know, that columns were originally erected in the form they have to represent and take the place of the trunk of trees which had been made use of till then, and if I may be allowed to venture here my opinion on the origin of bases I think it must have been when columns were made of trees, and that in order to preserve their bottom from rotting or sinking into the ground, square blocks of wood were placed under them, in the same manner and only larger than those at top intended for the better bearing of the entablature; which blocks at top were afterwards cut in form of bowls for ornament sake as I suppose were also in course of time, the bases cut in round mouldings representing snakes laying rolled up; possibly the reason why they were not given to the *Doric* order, was a drier and harder soil in the country where it was first practised, or that being made of harder timber it was not so much exposed to be damaged by the dampness of the earth.

HOWEVER the use of a base in this order, has certainly added to its beauty; and now that our eyes are used to behold it with this improvement, it would look very poor without it and indeed like a gentleman walking without shoes.

THE *Attic* base which most of the moderns have given it, being in my opinion too rich for this plain order, and having besides chosen it for the next I have designed one after that which VIGNOLA gives to this order, but not in the same proportions; for he includes the cincture of the shaft in the semi diameter given for the height of the base, which is an

* This author is *Rolland Freart fleur de Chambray*, and he concludes his droll argument with these words: "This observation being established upon those great examples which I cited, and reason serving for its guide, let it pass for demonstration." Excellently well spoken, *Monsieur Freart!*

error I have condemned in VITRUVIUS in regard of his *Tuscan* base, and which of course and for the same reasons, I must also condemn in this author.

THE profile of my base for the *Doric* order at fig. B. on the plate, will shew its proportions; I give half of its height to the plinth, and dividing the other half into five parts, I allow four for the torus, and the other for an astragal over it.

To the *Composite* order (which, for reasons given in their proper place, I make the middle order both for height and for strength) I have given the *Attic* base, as described by VITRUVIUS, without any alteration, and it may be seen on the plate, at fig. C. I shall not dwell on its proportions, which are well known, and may be seen as well as those of the other bases by the scales of parts, which I have annexed to each profile on the plate.

THE base I give to the *Ionic* order, is made after the manner of PALLADIO and SCAMMOZZI, who copied it from some antique works, but mine is somewhat different in its proportions, as they made their's higher than the semi diameter, by the whole height of the astragal, which they added to the *Attic* base to form this. It is true, that SCAMMOZZI will have it, that this is the plain *Attic* base, and that the astragal over it belongs to the shaft of the column, in the like manner as that at top. This argument, specious as it is, I can by no means approve of; since, if that is the case, why is there not in the *Ionic* and *Corinthian* columns, erected by the ancients on the original *Ionic* and *Corinthian* bases, and sometimes on the true *Attic* base this same member at bottom, which SCAMMOZZI pretends belongs to the shaft? The reason why the astragal at bottom, was never reckoned by the ancients a member belonging to the shaft, though that at the top was always allowed to be part of it is very obvious.

WHEN columns were first erected without either base or capital, the cincture at top (which was an iron-hoop to prevent the splitting of the column) by the drying of the timber and its lesser size at the top, soon got loose, and of course fell somewhat lower than the summit of the shaft; the weight of the entablature, pressing upon the uncovered part above the hoop, its weight squeezed the splitting wood into a projecting form, resting over the cincture: at bottom no such thing could happen, since the weight of the iron-hoop kept it down close to the ground, which of course, prevented such effect of the pressure on this end of the shaft; and what confirms me in that opinion of the origin of astragals is, the etymology of that name, which comes from the greek word *αστραγαλος*, whose signification is, *a bone in the foot*, and is likely to have been a name to express the hardened flesh at the heels of those who go bare-footed, as most of the ancients did. This, which was an accidental defect, incumbent on all works of that kind, was imitated when columns were made of stone, and became by practice, a necessary member at the top of columns only, where it has a very good effect, as it serves as a kind of base to the capital: as for the bottom, as I observed before, the ancients did not use to give it any astragal, as may be seen in the remains of antiquity, both in the *Ionic* and *Corinthian* order.

THEREFORE, to make my *Ionic* base with this astragal at top, I was obliged to make use of other proportions than those of PALLADIO and SCAMMOZZI, in order to take this member within the usual height of the base. I have annexed on the plate, fig. D. three scales to the profile of this base, shewing the ordonnance of its several members, which may be explained in a shorter way than it explains itself upon the plate. The semi diameter having thirty minutes, I give nine to the plinth, seven to the lower torus, five to the scotia, one to each listell under and above the scotia, five to the upper torus, and two to the astragal.

I HAVE said already in this chapter, that PALLADIO and SCAMMOZZI, give to the *Corinthian* order the *Attic* base, with the addition of three astragals: I should have said, of two only, since the third (as they will have it) belongs to the shaft, as in the *Ionic's*. I have said enough on this impropriety, but there are more reasons besides, to give the exclusion to the base appropriated to the *Corinthian* order.

AND, first, The astragals they have added to the *Attic* composition, are so small, that at the same distance that columns do appear to the best advantage, they are not to be distinguished from the upper and lower torus, in which they seem confounded.

THIS confusion is also the effect of joining so many round members together, which is a method that has been found fault with, in SCAMMOZZI's works especially, and which he himself condemns*; and in fact, the three round mouldings that are close together at the top of his *Corinthian* base, have a very bad appearance, independant of the confusion they help to create.

To avoid these faults, I have composed from the *Attic* base, a new one for the *Corinthian* order; in which, by reducing the size of the mouldings and increasing their number, I think I have added to the beauty of its original, the lightness and delicacy requisite for the members of this elegant order.

THIS base, the outline of which is on the plate [fig. E.] is composed of three toruses, two scotias, and four listells; it contains five circular and five angular members, the plinth included: they are all intermixed and strongly marked by the disposition of the two scotias between the toruses, so that at a distance or upon a scale that does not permit the square little members to strike the eye and mark the division; it is nevertheless plainly perceivable by the disposition of the whole. In short, it is the original *Attic* base raised a story, though not increased in its height.

UPON the whole, I think I have kept a just correspondence in the disposition of the five bases, with the other parts of the orders to which they are applied, and between the progressive increase of their members and the gradual diminution of their size.

To the profile of the bases, I have added [fig. F.] a scale of twenty-one parts of four minutes each, which is the breadth of all the bases at bottom; and the diameter of the column being always sixty minutes, it follows that the projection of the bases is three of those parts or twelve minutes on each side.

As to the particular projection of each member, I settle it by a very easy method, which serves for all bases except the *Tuscan*, where there is no need of it, as its two members have the same projection. The lower torus has, in all bases the same projection with the plinth; and to find the proper projection of the other members, I draw a line from the angle of the plinth at bottom, exactly through the centre of the lower torus, to the summit of the base: upon that line the centre of the other torus and astragal ought to be placed, as also, the upper angle of the listell which is under the scotia; and, as to the listell that is over the scotia, it must be perpendicular with the centre of the torus which is immediately above it.

* I will give here his own words. "As to the particular proportion of members, it consists, that in the same cornice there must be a correspondence between the members, so that two or three mouldings either all round or all square, be not met with together, nor several of the same size; but there must be a contrast in the disposition, both of their form circular and angular, and of their different sizes: for instance, the beauty of a base is, that its different mouldings, some of which, as the plinth and listells, are square, and others, as the toruses, scotias and astragals are circular, be intermixed, &c." *Davillier's translation of Scammozzi*, chap. xxx.

THIS way of regulating the projections of the several parts of bases has a propriety, which is, that it does not require great strength of memory to remember it; and it has besides, its principle in the nature of this part of the orders, whose form ought to be pyramidical. SCAMMOZZI, who I believe wrote rather to prevent his workmen from stealing his art than for their instruction, settles those projections by a calculation* which appears to have had no other principle, but the dimensions of some antique works, or his own fancy; and of which, I believe he would hardly have been able to give a proper account.

THE two listells being traced by the foregoing method, their angles make the two extremities of the scotia, which I form by describing two segments of circle, by means of two triangles, one equilateral, and the other ambligonal. I make this last somewhat different from SCAMMOZZI's, from whom I borrowed this method, because his contours have something dry and stiff in their form, which I would avoid; and making as I do, the scotia a hollow not quite so deep, it is more graceful and appears stronger; for when it has more curve, it seems as if bending under the weight that rests upon it, which is a fault that must be carefully avoided. I have traced these triangles on one side of the scotia of the *Attic* base; and the same method will serve for all kind of scotias, whether in base, pedestals, &c. I have made a point in the ambligonal triangle, to mark the place where SCAMMOZZI makes the obtuse angle, which will change the position of the equilateral triangle, whose base will not be horizontal as mine is, but sloping as the line that forms the obtuse angle.

C H A P. VI.

Of the Trunk or Shaft of Columns.

THIS part of the column was originally the whole of it; it has not only received by improvements the addition of a base and capital; but in itself it has been ornamented by the addition of members both at top and bottom.

I HAD, in the foregoing chapter, occasion to speak of the origin and propriety of the members added to the shaft, and which peculiarly belong to it; they are an astragal and cincture at top, and another cincture at bottom.

RULES and proportions for these members seem very unnecessary and trivial, yet, ARCHITECTS have given rules for them, but without accounting for their propriety; and if we look into them, we shall find they were not grounded on the nature of things, but on the practice of such as followed their own fancy or copied other people's works.

* His account of the projection of the members of his *Corinthian* base is very curious; here it is in his own expressions:

“There are five principal projections, by which, the rest are regulated; the cincture and the scotia project three parts beyond the foot of the shaft of the column, the upper listell of the scotia projects of a quarter of part, and the lower listell of three eighths; and all these projections make two parts and three eighths of the upper torus, or three eighths of module.” A man must have a good memory to remember all these parts and eighths of part. And, it is no wonder that an instrument has been made for the use of workmen, by which, they can without troubling their heads with your *whys* and your *wherefores*, find every proportion of all the members.

"THE astragal and cincture should be the same in all orders, and their proportion is, an eighteenth part of the diameter for the height of the astragal, half as much for the cincture under it, and a twentieth part for the cincture at bottom, whose projection as well as that of the astragal, is four minutes beyond the naked of the shaft, the cincture at top having half as much." These are the proportions given. Let us examine whether they are natural, and consequently proper.

As to the astragal, I cannot have the least objection to the proportion given for it; but I think those for both cinctures preposterous. Let us remember, that the origin of those members, were iron-hoops binding the columns at top and at bottom. Therefore, we must suppose that a column of thirty inches diameter, had a hoop at bottom two inches thick, and only one inch and a half high, which is out of all natural proportion, not only in regard of the hoop in itself, but also considering the size of the column, which could never require a hoop above two minutes thick, which for a column of thirty inches, is one inch in thickness; this is certainly a very good proportion, and which can suffer to be reduced to one half for the cincture at top. Besides, it will be higher than thick, which it must certainly be, not to be an unnatural piece of work.

THEREFORE, leaving to the astragal (which having an accidental origin, can, without impropriety, be made greater or lesser) proportions nearly equal to those already in use; I give to my columns, cinctures of two minutes projection in all the orders for that at bottom, and one minute for that at top; and, for their height, I shall abide by the rules mentioned before, which is three minutes for that at bottom, and one minute and a half for that at top.

THESE cinctures will have in thickness two thirds of their breadth, which is, according to nature and reason.

THE astragal, for the sake of easy calculation, I make of four minutes in all the orders, both in height and projection.

THE cinctures are always united to the shaft with a sweep, which looks very insignificant when the projection of the cinctures is too great; but, being reduced to my proportions, it will appear no more than the swelling natural to the wood, under the pressure of a hoop of iron, provided this sweep is lengthened to a sufficient distance, and not made in the form of a quarter of a circle; I make it at bottom as long as the cincture is high; and at top I bring it to the point where the diminution ends.

HOWEVER immaterial it may appear to discuss as I have done the principles of those proportions, I think I could not dispense with doing of it, as I have promised to enter with the utmost exactness into the ordonnance of all the members of columns.

To keep up the resemblance that columns bear to trees, their shaft must be smaller at top than at bottom. Some ARCHITECTS make this diminution begin from the bottom of the shaft, others from a certain part of it, about a third of its height; and others make them swell or increase from the bottom to about the third part, and thence diminish gradually to the top.

THE first and the last of these three different methods, I am authorized to disapprove. The first is, indeed, grounded on the natural form of trees, but, it has been condemned by the practice of the best ARCHITECTS, both ancient and modern; and, indeed, a column diminished from the bottom has a very bad appearance, it looks weak and emaciated.

THERE is not the least instance of the third method in the remains of antiquity; what gave birth to it, is a promise of VITRUVIUS to give rules for executing the swelling and diminishing of the shafts. But he never performed this promise, which I suppose he made
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on the first thought of it; and having, afterwards, duly considered the thing, he did not find it worth recommending, or even of further notice; and, indeed, this method is quite unnatural, and will make the orders look extremely heavy.

THE method of diminishing the shaft from only about the third part of it, having been reckoned the best by the greatest masters, I shall entirely adopt it. It would be too tedious, to give here an account of all the differences there are, both in the antique remains, and the works of the moderns on this point. VITRUVIUS would have the diminution to be greater on short columns, than high ones of the same order: but his opinion was not authorized by the general practice of the ancients; he would have also, the *Tuscan* column diminished at top of a fourth part of the diameter below. This would be absurd, and defeat entirely the purpose of strong and solid columns; but since it has been a maxim in ARCHITECTURE to diminish that order more than the others which indeed is wanted to give it a bold aspect; I, after VIGNOLA and other able masters, make it a fifth part, which is twelve minutes. In the other orders I have made it eight minutes, which is very little more than others have done; the most general diminution being seven and a half.

THE point where the diminution begins, was generally settled at the third part of the shaft. This I always thought was rather too low; and, as it is necessary to make the diminution striking without increasing it, I tried whether the shortening of its length would produce a better effect, and being satisfied with the experiment, that it gave a bolder aspect to the orders, I have settled it in the following manner:

In the <i>Tuscan</i> order it begins at the height of	8	} modules from the bottom of the base.
In the <i>Doric</i> ,	9	
In the <i>Composite</i> ,	9	
In the <i>Ionic</i> ,	10	
In the <i>Corinthian</i>	11	

I have made it the same in the *Composite* as in the *Doric* order, to preserve entire the character of the *Doric* shaft given to the *Composite*.

As the diminution cannot reach quite up to the top of the shaft, on account of the astragal, cincture and sweep, I fix it half a module lower, and the length of the diminished part of the shaft will consequently be,

In the <i>Tuscan</i> ,	11	} modules.
In the <i>Doric</i> ,	12	
In the <i>Composite</i> ,	12	
In the <i>Ionic</i> ,	15 $\frac{1}{2}$	
In the <i>Corinthian</i> ,	14	

As to the form that is to be given to the shaft by the diminution, some make it a line somewhat circular from the point whence it begins, to that where it ends, which line, may be described by a thin bending rule as PALLADIO practised it. But the form this method gives to columns, has something in it very unpleasing; they look as if bending under the weight they support, like a man over loaded with a heavy burthen. When columns were first made of trees, they might have been subject, especially the higher orders, to that inconveniency; and thence, perhaps, was this manner of diminution first imitated. But if we aim at improvement in any art, we must not be satisfied with following the models the great masters who lived before us have left, we must consult our own judgement; and, after looking with great attention into the nature of things, regulate our own determination accordingly.

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THE shaft of a column receives no increase of strength and solidity by any swelling, either in the diminution or beyond the diameter of the shaft at bottom. The weight of the entablature and capital bears perpendicularly from the surface of the shaft at top to that at bottom. If any increase is given to the bigness of the shaft at top, it will make it stronger; provided this increase is greater, or, at least, equal, in the undermost parts as in the upper ones: therefore, if at one module from the top of the shaft, I make the diameter half a minute or a minute wider, it will strengthen it, provided this increase of diameter goes at least in a perpendicular line to the bottom; and, if I give it a gradual augmentation, it will be still stronger. But if part of that augmentation bears upon nothing in a perpendicular direction, as certainly will be the case if made circular; so much of it will not only be useless, but will have a bad appearance; and, what is worse, will load the column with an unnecessary weight hanging round it*.

I THINK, therefore, the best method is, to make this diminution by a straight line between its two extremes. Every particle will then bear its portion of the weight; and the column will appear bold and strong, by shewing itself able to support, without stooping, the burden it must bear.

THE plate I have given of the five orders shews the effect of my diminutions, which I leave to the judgement of the impartial connoisseur.

THOUGH the diminution of columns is in general a practice not to be deviated from, yet there are cases in which the ARCHITECT should make this rule give way to more material reasons. But of this I shall speak in another place.

THE shafts of columns are sometimes fluted; that is, with channels cut round their circumference from bottom to top. Sometimes these flutings begin from the third part only; but I think that a piece of false taste; and, indeed, it is seldom practised. Sometimes also the channels are filled up for about a third of the height from the bottom with a round moulding, and these are called cabled flutings.

THE flutings given by the *Greeks* to columns were very wide; they were first intended to represent the folds of a garment, and must have been, therefore, of irregular dimensions. But this, which must have given a disgraceful appearance to columns, was, in course of time, improved to a regular manner of fluting, and the original representation gave room to symmetry, which is certainly preferable. The *Romans* have improved further upon it, and have made these flutings narrower and in greater number, and this causes the column to appear very rich and elegant.

VITRUVIUS gives the manner of fluting the several orders: The *Doric* should have twenty channels, not cut very deep; their circumference must be only a quarter of a circle; and no space should be left between the channels but the angle made by the two curve lines which form the cavities.

THE *Composite* having, according to my proportions, the same shaft with the *Doric*, should be fluted after the same manner, in order to preserve the character of the shaft: and this manner is also more suitable to the solidity of that order than any other more delicate mode of flutings.

THE *Ionic* and *Corinthian* shafts should have twenty four channels, and these cut in the form of a semicircle, with a narrow band or listell between the flutings, which should be two minutes wide, whereby there remain five minutes and an half for the channel. To

* This will appear better by the example I traced of it on the plate of the five orders over the *Tuscan* column.
make

make a difference in the enrichments between the two orders, I would give to the *Corinthian* cabled flutings to the third part of its height.

As for the *Tuscan* order, its shaft is never fluted; and, indeed, it would be a gross error to over ornament an order whose greatest beauty confessedly consists in its plainness and simplicity.

I MUST observe here, that great attention should be given to propriety in fluting columns; and that it should not be done but where increase of ornaments in the orders is requisite and natural.

FLUTING adds nothing to the beauty of the orders, in the eye of those that have any knowledge of ARCHITECTURE; it strikes only beholders with an aspect of richness which would not be suitable to all buildings. Besides, in countries where the air is not very pure, fluted columns will sooner turn black and dirty than plain ones. This may be seen in all our edifices here, in which the plain and naked stone retains its natural whiteness much longer than those parts that are worked into mouldings of any kind, and which will soon turn black, and the sooner where they have the richest carvings. Therefore, outward columns, entablatures, &c. should be made to all buildings, especially in this country, as plain and as void of ornament and mouldings as the order will permit; leaving all those superfluous additions for works of decoration in the insides of buildings; and, if ever used on the outside, it should be only on such edifices where propriety absolutely requires that extensive richness of the orders, such as triumphal arches, or any other buildings, raised merely for decoration. In any other, I think, the plain simplicity of the orders greatly preferable to the gaudiness of flutings, embroidered freezes, &c.

I MIGHT, in the chapter of Pedestals, have said something on the ornamenting of their die; but I thought it better to argue that point in the same place with the flutings of columns.

THERE is a propriety in cutting into pannels the die of pedestals, which has been very little attended to: some authors have only observed, that in the *Doric* pedestals, the pannels should be in a relievo or projecting outwards; and, in other orders they should be hollowed; but something more ought to said on the subject.

ANY judicious beholder, will find something that displeases him, when he sees a fluted column on a plain pedestal, or a plain column on a paneled pedestal. Increase of ornaments should always be alike, and in the same proportion, in all the parts of the orders. If the column is fluted, the die of the pedestal should be worked and cut into pannels; if left plain, so should the die of the pedestal be left plain also.

WHEN the pedestal is thus ornamented in its die, the mouldings of its base and cornice should be also enriched with carvings, more or less delicate, according to the orders.

THE *Tuscan* column being never fluted, its pedestal of course, is never to receive any further ornament than the plain mouldings of its base and cornice.

IN the *Doric* order, where the column is fluted in a less rich manner than in the *Ionic* and *Corinthian*; the die of the pedestal, must only have a plain pannel raised a little, with only a sweep, from the naked of the die. The breadth of this pannel, must be exactly the diameter of the shaft at bottom, leaving the upper and the lower band of the naked of the die of the same breadth as the sides are, viz. twelve minutes. These proportions must be observed in all the orders, whereby the pannel will be wider than high in the *Doric* order, in the *Composite* it will be almost square, and in the *Ionic* and *Corinthian*, higher than wide.

THE die of the *Composite* pedestal should be like the *Doric's* in relieve, on account of sorting with the *Doric* shaft given to this order, adding only a small round moulding to the sweep, that unites the pannel to the naked.

THE pannel in the *Ionic* order, must be hollowed in the die with a couple of mouldings, and so left a plane in all its surface.

BUT, in the *Corinthian*, the pannel being sunk somewhat deeper with three mouldings, should have another pannel raised with a sweep and a moulding half the cavity; this last should be forty four minutes wide, and high in proportion.

THE reason of pannelling the die in relieve in the lower orders is, that it gives it an additional look of solidity, as the hollowed pannels make the pedestals in the other orders more delicate.

C H A P. VII.

Of Capitals.

I HAVE taken all my capitals from PERRAULT: the form and manner of this part of columns, is the best known of all; and even those who know nothing of the rest, are in general, acquainted with this. To such, capitals are the only distinction between the different orders; it is therefore, needless to say much on this subject, and a few observations, chiefly on rules of propriety will be all the contents of this chapter.

THE *Tuscan* and *Doric* capitals I took from PERRAULT, are those of VITRUVIUS. In the *Tuscan* order, the capital must be always left plain without any carvings on the ovolo or astragal, though it is otherwise in the *Trajan* column, the only antique remains of that order we have left; but (and it is an observation I have already made) this column should not be looked upon as a proper model for works of this order, unless it were works of the same kind. And it certainly would be an impropriety to add carvings to this capital when the shaft is never allowed flutings, but must be plain by its constitutal character.

THE ovolo of the *Doric* capital, is some times left plain, and some times carved; this, like the flutings of the columns, should not be done without reason and propriety: indeed, we have instances in the antique, of the capital being thus ornamented, though the shaft of the columns is plain; yet, I had rather be guided by the same rule as for the fluting of the shaft, as it is not an ornament essential to this capital, but an enrichment, which, accordingly should take place when others are introduced, but never without them. Sometimes, to make this capital still richer, the neck is adorned with roses, &c. cut in relieve round it.

THE *Ionic* capital, which after PERRAULT I adopt, is the original antique capital of that order.

SCAMMOZZI invented a new capital, which is called the reformed, or modern *Ionic* capital; I believe he took it, though he does not say so himself, from that in the temple of *Concord*; and if he did, I must think, that instead of improving upon it, he rather spoiled it.

SCAMMOZZI.

SCAMMOZZI gives for his reason, the bad figure the antique capital makes on columns which are at the corners of buildings, and should consequently be seen front wise on the two sides of the angle, which cannot be effected but by an alteration in the capital of those columns that stand at the ends of the porticoes, as has been practised in the temple of *Fortuna Virilis*; which alteration gives indeed to the capital a deformed shape, when seen on the ground detached from the column, but has a very good effect when in its place. To obviate this, SCAMMOZZI has made a capital which has a very insignificant appearance, as well as that of the temple of *Concord*; and is moreover, very defectuous. Instead of the bark, which being rolled up by shrinking, forms the volutes of the antique capital, he has placed four volutes like ram's-horns sprouting out of the bowl, which he makes as the antique bowl, of very little depth; so that it is quite impossible, that the root of those volutes can keep in by their weight; if the abacus did not press upon the top of the volutes and keep them steady, the outer part of them seems of a magnitude more than sufficient to draw out by their weight the part which is supposed resting in the bowl. In the temple of *Concord*, the ARCHITECT made his capital as high as a *Doric* capital, which gave him room to make a vase of it deep enough to contain a large and heavy root for the volutes. Another great fault has been found in SCAMMOZZI's capital; which is, the abacus not being posed on the brim of the bowl, but being only supported at the corners by the volutes; so that these volutes which ought to look as a tender and delicate member, have not only the abacus, which indeed is very thin, but also the whole weight of the entablature to bear, which is an error of judgement unpardonable. In the temple of *Concord*, they are not so; the abacus is of a proper thickness, and rests directly on the vase, the volutes bending under it and rising on the sides, in the same manner as is done in the *Composite* capital.

HOWEVER, this capital in the temple of *Concord* is, as I said before, like that of SCAMMOZZI, very insignificant.

ON the contrary, the antique capital bears still a resemblance to its origin, how much soever it may have been altered by the necessity of improving upon stones the rude form it had at first, when the volutes were accidentally formed by the shrinking of the bark that was placed over the bowl to cover it.

THE ovolo of this capital is almost always carved, whether the column is fluted or not; and, as this is become by practice, a kind of character of this capital, I would not condemn it, only I would avoid cutting the astragal of the shaft into beads and berries, as often done in this order only, unless the column was fluted, in which case it should not be omitted.

THE *Composite* and *Corinthian* capitals may be considered here together, though different in their form.

SOME authors are of opinion, that particular sorts of leaves are proper characteristics of these two capitals: some will have acanthus leaves only given to the *Corinthian*, as VITRUVIUS; others will fix the oaken leaf for the *Composite*, as SCAMMOZZI; but I think they all mistook the matter.

THE *Greeks*, before the *Composite* order was invented, used in their *Corinthian* capitals, several sorts of leaves; acanthus was indeed the first and original sort, but we find no traces of its being given to that capital at any time, exclusive of others: olive, laurel, oaken, or palm leaves were made use of; and sometimes even they invented leaves after their own fancy, and not imitated from nature: an example however, not to be followed.

It is plain therefore, that in the choice of leaves, they either followed fancy without any other motive, which does them no great honour, or chose particular sorts of leaves according to the nature of the buildings they erected. If this was the case, it shews a nicety of judgement, which, certainly we should imitate; and in my practice, I shall always observe this scrupulously.

For instance, to the capital of columns either *Corinthian* or *Composite*, on the outside of the palace of a monarch, I shall give laurel leaves as emblems of victory abroad: the same orders in the inside of such a palace shall be decorated with olive leaves, as emblems of peace and tranquillity at home.

In edifices destined to divine worship, palm leaves shall be used; in a triumphal arch, laurel; in any building for the use of maritime affairs, oaken, &c. always alluding by the ornaments, as much as possible, to the destination of the building.

THE height of the Capitals of the five Orders, is:

In the *Tuscan*, one module and a half.

In the *Doric*, the same.

In the *Composite*, three modules and a half.

In the *Ionic*, one module, but the volutes hang lower*.

In the *Corinthian*, three modules and a half.

THE *Greeks* made this last only three modules or a diameter in height; but the *Romans* have given it ten minutes more, in lengthening the leaves round it, which has been a great improvement, as it has given to this capital a more graceful and elegant form. There are even among the remains of antiquity, *Corinthian* capitals of higher dimensions; but this, which I give it, has prevailed among the best modern authors, and is become almost general; though, it would not perhaps be worse, if made a few minutes higher or lower: but the ARCHITECT in this, as in other things, must fix his own practice.

C H A P. VIII.

Of Entablatures.

THIS, one of the principal parts of the orders, has been, like the others, made of as many different proportions as there have been ARCHITECTS†.

PERRAULT, whom as I have said before, I follow as nearly as his proportions can suit mine, has given the same height, viz. Six modules of twenty minutes each, to the entablatures of the five orders; and, except a few alterations in some of their particular members, I have taken my entablatures entirely from his.

* This capital, in the temple of *Concord*, has one module and half in height; and those who do not approve of the antique capital, would do well to imitate this instead of *Scammozzi's*.

† By *Architects*, I mean here the leading ones, and not those who implicitly follow the rules laid down by such as they have chosen for their model.

INDEED,

INDEED, I think this method of making all entablatures six modules high, the best I could follow; not only because it is a medium, which, according to his usual way, he took between the proportions of the antique remains, and the opinion of the several authors who have treated the subject; but also, because they are, when made all of the same height, higher or lower in proportion to every order as they are more or less heavy or delicate; and because, when made of this very height of six modules, their progressive decrease, in the proportion they bear to the height I give to the five orders, bears the same proportion to the progressive increase of the columns (which is two modules from order to order) that the entablatures have with the columns themselves, as will be seen by the following table:

TABLE of the Proportions Entablatures bear to Columns.

The <i>Tuscan</i> has	6 minutes.	} Less than three tenths of the height of their respective columns.
The <i>Doric</i> ,	18	
The <i>Composite</i> ,	30	
The <i>Ionic</i> ,	42	
The <i>Corinthian</i> ,	54	

WE see by the foregoing table, that there is a gradual and equal decrease in the relative height of entablatures as the orders rise; this decrease is twelve minutes (more from order to order) less than three tenths of the height of the column.

THESE twelve minutes being three tenths of the two modules increase in the height of every column from order to order; this decrease in the relative height of entablatures, bears as much as possible the same proportion with the increase of columns, as the entablature bears to the lowest column, which is three tenths of its height, less only six minutes. It is impossible to bring it nearer, without overthrowing all the other proportions of the orders; and the difference is so trifling, that it amounts to no more than four sevenths of a minute.

WAS I to give either five or seven modules to the height of the entablatures; the progressive decrease of their relative, from order to order would still be twelve minutes (more) less than three tenths, which twelve minutes are three tenths of the increase of columns; but then the proportion of the entablature to the lowest column, would be either two tenths and a half, or three tenths and a half, which could not keep proportion with its gradual decrease of three tenths of the increase of columns.

THIS calculation will perhaps appear, at first view, very trite and of no moment; and I own it is very little entertaining for the curious, and rather of dry reading; but, I think it worth the observation of the practitioner, as it shews the great propriety of the whole system of my proportions; for the difference, which in mine is four sevenths of a minute, is greater even in PERRAULT's, being one minute and one seventh, on account of his making the *Tuscan* column twenty two modules, and so on, instead of twenty one as I make it.

THE entablature being composed of three parts viz. The architrave, the freeze and the cornice. I shall give a cursory account of their several proportions and members,

PERRAULT composed his *Tuscan* entablature, from those of SERLIO and VIGNOLA for the same order; he took SERLIO's architrave and freeze, and imitated VIGNOLA's cornice, but made it of more masterly and more graceful proportions: VIGNOLA making the large members too large, and the little ones so small that they are hardly visible.

THE architrave with only one fascia and a listell at top joined to the fascia by a sweep, is a proper characteristic of the plainest of orders, and cannot in any other shape, appear as a *Tuscan* architrave when detached from all the other parts of the order: was it made with two fascias, who could distinguish it thus detached from a *Doric* architrave? PALLADIO, after VITRUVIUS, makes it a square block without even a listell. But then it must be observed, that both in general give a timber architrave to this order, and when made of stone the listell is almost absolutely necessary to mark the difference between that and the freeze. SCAMMOZZI on the contrary gives it two fascias, but I think it must have a distinctive character in all orders; and I shall shew in the course of this chapter, that I make architraves as distinguishable, as even the capitals of columns.

FREEZES, are to the whole entablature, what the die is to the pedestal, and the shaft to the column: it is the main body of it, the member supported and crowned; and if I may be allowed an odd expression, the monumentary member in the entablature.

THE ancients used to carve on the die of pedestals, on the shaft of columns and on the freeze of entablatures, the achievements of the heroes to whose honour and memory triumphal arches, columns &c. were erected; or emblems of the worship paid to the Gods to whom temples were dedicated. All the other members had no share of this, they were ornamental members to these, and seemed calculated, only to preserve entire and shelter them from the dampness of the earth and all the injuries of the weather.

CONSEQUENTLY, in all orders, the freeze should preserve the same character as the shaft and the die: I have observed in a foregoing chapter, that these two last should be either, both plain or both ornamented. By the same reasons of propriety, when they are ornamented, that is, the one cut in pannels and the other fluted, the freeze should be adorned with basso relievos, alluding always to the use of the building; but when the shaft and die are left plain, the freeze should also be plain and without any ornaments, except perhaps an inscription. This may be deemed no ornament, and may also pass for ornament, if the freeze should with propriety be adorned, but in this case it would be better if the inscription was allegorical, instead of being only indicative. These, are reasons of propriety ARCHITECTS in general pay very little regard to, and which yet, if duly observed, would shew their genius and the nicety of their judgment.

FROM all I have said on this point it follows, that the *Tuscan* column being never fluted, the *Tuscan* freeze must always remain plain, unless an inscription is deemed necessary and useful, and then this is its place.

THE cornice given to this entablature corresponds well with the rest, and crowns the whole order with due propriety: the ovolo that terminates it, looks more substantial than the cymatium and listell in which terminate all other cornices. The mouldings of this being reduced to the number of six, have room to be of a proportionable size; so that the air of strength and solidity which is peculiarly proper to this order, is happily preserved from bottom to top in all its members.

THE general proportions of the members of this entablature and all others, the *Doric* only excepted, are thirty six minutes to the architrave, the same height to the freeze, and forty eight to the cornice, the whole being one hundred and twenty.

As to the proportions of the members of this cornice, they may be gathered from the plate and are very accurately described by PERRAULT: besides every ARCHITECT should in the ordonnance of a cornice, pay more regard to the situation of his order, whether high or low pitched, than to any fixed rules, except general, such as the projection of the cornice which should be equal to its height, the projection of the drip or corona, which must

must always project beyond all the other members below to the very ground; and that all the members of the cornice be so disposed, as to be distinct from each other, at such distance as they are to be seen when the whole is in its proper place.

THERE is not a point in ARCHITECTURE in which the opinion of VITRUVIUS has been so universally adopted by modern authors, as the height of architrave and freeze for the *Doric* order. All, except SCAMMOZZI, give thirty minutes to the architrave; and all without exception, give forty five minutes to the freeze. PERRAULT makes his architrave with only one fascia: in this I differ from him, and I make it with two fascias, after PALLADIO and several others, and though PERRAULT has followed VITRUVIUS in this, I cannot approve of his choice: I have given one fascia only to the *Tuscan* architrave; this must have a distinctive character, and though there are drops to this architrave under the triglyphs of the freeze, that is not sufficient to distinguish from any other, since those drops are in some cases taken away, as in archivotes which must have the form of the architrave of the order that accompany them. It is therefore necessary to give this architrave a character of its own, which character is two fascias not divided by any other moulding. Only whenever the drops are taken away an ogee should be substituted in their place under the listell. I give ten minutes to the lower fascia, fifteen and a half to the upper one, and four and a half to the listell. The drops and their fillet have five minutes: when this architrave is made without drops, the listell should have only three minutes, the ogee five, the upper fascia twelve, and the lower ten.

THE *Doric* freeze is almost essentially adorned with triglyphs whether the column is fluted or left plain and they are not deemed an ornament. These are become a characteristic of the *Doric* order and can seldom be omitted: yet some time they are; and this omission can be justified, either by a plainer aspect required in the order, where the *Tuscan* though most properly by its plainness is not eligible on account of its being too low, by the freeze being filled with an inscription, by a change in the members of the cornice, sometimes very eligible on account of situation, or even, by the fancy and taste of the ARCHITECT for variety's sake &c. Without speaking of the conveniency of getting thereby over the difficulty caused by the proportion given to the intervals between the triglyphs; of which more hereafter. In this case, it will be better to make the entablature of the ordinary proportion of thirty-six minutes, for both architrave and freeze, and forty-eight for the cornice. But in general, as triglyphs have been given universally to this freeze, it is better not to take them away without good reasons.

THEY are not, I said, deemed an ornament of the freeze, but rather an essential part of it; and, consequently, are applied without impropriety to the *Doric* freeze in any kind of buildings whatsoever, whether the columns are plain or fluted. But the case is very different in regard of those ornaments which are carved in relieve in the intervals, between the triglyphs called metopes; which intervals must, by a *positive and irrefragable law*, be absolutely square*. These metopes, if the columns are plain, ought to be left naked, if fluted they should be ornamented.

THE ancients used to fill the metopes in the *Doric* freeze with figures of rams or ox-skulls, offered in sacrifice to their gods, intermixed with figures of basons whose use was to receive the blood of victims, &c. Sometimes, instead of these, they placed there the heads of their gods, or other emblems of religious worship. These kinds of ornaments were for temples; to any other buildings they used trophies, implements of war, vases, flowers, &c. always

* This *positive and irrefragable law* shall be examined and inquired into in the course of the next chapter.

alluding to the use to which the buildings were applied. This attention of the ancients I would recommend to the moderns, who do not in general pay a sufficient regard to propriety. They may indeed plead the example of PALLADIO, who in the design of a house he built at *Vicenza* for count VALERIO CHIERICATO, adorns the metopes with ox-skulls and basons, and in the cloister of a convent at *Venice*, introduces also ox-skulls in a *Doric* freeze without triglyphs: but though PALLADIO has done it, it is nevertheless a gross impropriety, except count VALERIO, a noble Venetian, had been a butcher, and the Venetian convent a slaughter-house. SCAMMOZZI recommends this attention to propriety, and a man of judgement will avoid being guilty of such an error.

THE cornice of this order, though not so high as that I give to the other orders, has a greater projection: in all the other orders, its projecture is equal to its height, which is forty-eight minutes; in this the projection is sixty-four minutes, though its height is but forty-five. The cause of this is the mutules and drops which must be in the soffit of the corona over the triglyph; these mutules must be of the same breadth as the triglyph, viz. thirty minutes, and as they are generally square, having six rows of drops, they produce of course a greater projection in the corona and other members above.

WHEN this great projection becomes an inconveniency, the ARCHITECT will do well to reduce it, either by making the mutule less in depth, making only three rows of drops instead of six, as PALLADIO, SCAMMOZZI and several others have done; or by omitting intirely the mutules and drops. In this case he may yet preserve the triglyphs, and this practice is not without a precedent amongst the best works of antiquity: but for my part, I would take them entirely away, and make the freeze, plain or adorned, as if it was any other order. There is a beautiful cornice without mutule given to this order in the baths of DIOCLETIAN in *Rome*; but I think it too delicate for that order. Dentells which are there substituted to the mutule, being in my opinion improper for the *Doric* order, which is a strong order. I should make it with plain and substantial modillions, and give it only nine members. I must repeat here, that when the cornice is thus ordered, and the triglyphs are taken away from the freeze, I should make the whole entablature after the same proportion as all the others; but if the triglyphs remain, then the cornice must be only forty-five minutes high, and should have only forty-five minutes projection, which is full enough to give room for the projection of the corona, beyond that of the cornice of the pedestal.

THE *Composite* architrave, as it is in some of the antique works, as the arch of SEPTIMUS, and as PALLADIO and VIGNOLA make it, with only two fascias, is a further proof of what I said in the second chapter of this work, on the propriety of lowering this order below the *Ionic*; since both antique and modern ARCHITECTS make the architrave of this last order with three fascias. Notwithstanding the great height they gave to the *Composite* column, they were sensible it was a heavier order than both the *Corinthian* and *Ionic*, and they gave it a heavier entablature which suits better my proportions than any of theirs for that column.

THE *Composite* order, as I make it, being the richest of the low orders, it is proper its architrave should be more ornamented than the *Doric*, and even the *Ionic*, though this last has more delicacy. Therefore, and also to give it a distinctive character, I separate the two fascias with an astragal, and over the upper one is an ogee and listell at top.

IF the freeze is to be ornamented, the character of this order requires large ornaments, leaving those that are more delicate to the superior orders; something in the manner of the *Doric* freeze, but in a somewhat richer design, and without giving a greater height to this freeze,

freeze, would have a fine effect on it: but the choice of these ornaments must be left in all cases to the ARCHITECT, who cannot err if he pays due regard to propriety, avoids making this freeze too delicate, and remembers that the column of this order has a *Doric* shaft and is fluted in the same manner, to preserve and agree with the appearance of strength the proportions of these two orders give them.

I MAKE the cornice of eleven members only, instead of thirteen, as PERRAULT makes it: but, as he gives no more to the *Corinthian*, I thought proper to make a distinction of orders in this point, as well as in others.

PALLADIO and all the moderns have given to this order, plain and massy modillions, which is another character of heaviness, that agrees but ill with the height they gave to the column, but is well adapted to my proportions.

I SHALL speak more at large of modillions, triglyphs, &c. in the chapter of intercolumniations, and therefore shall say nothing more here on this subject.

THE *Ionic* order being the plainest of the high orders, and at the same time, the most delicate of all orders, on account of its shaft which is higher by ten minutes than the *Corinthian's*, though the whole order is three modules lower; it is necessary that in the entablature, the same plainness and delicacy should be preserved and duly united.

THEREFORE, the architrave of this order is made with three fascias, but no astragal nor any other moulding divide them; the crowning of it, is only an ogee and listell.

THE freeze is often made with a swelling, and the authority of VITRUVIUS is of great weight in favour of this practice, but it was nothing less than general among the ancients: we find such *Ionic* freeze only in the baths of DIOCLETIAN; and PALLADIO, as well as most of the moderns, have shewn dislike to it.

INDEED, I cannot think how VITRUVIUS thought it eligible; for certainly this swelling gives a heavy look to the order, and is really an increase of weight, very improper in the most delicate of all orders. It is true, VITRUVIUS made this freeze smaller than other freezes; but then of course, the other members of the entablature must be heavier, which produce the same impropriety. Was I to give a swelling to the freeze of any order, it should be to the *Composite*, occasionally. When the *Ionic* freeze is ornamented, it should be in a very delicate manner but not overrich, in order to preserve the character of this order: we have a fine model in the temple of *Fortuna Virilis*, which is well worth imitation.

THE character of the *Ionic* cornice, is dentells; modillions would be too heavy for this delicate order. PERRAULT gives it ten members, and I make it with eleven, in order to keep due proportion.

THE *Corinthian* order being the uppermost in height, richness, and elegance, its entablature must be ordained accordingly. The architrave has three fascias; between the two lower ones, is an astragal; between the middle and upper one, is an ogee; and the whole is crowned with four mouldings, two circular and two angular.

THIS freeze, when adorned, should be as elegant and as rich as possible, no pains should be spared to embroider it, as the very name of freeze imports, in the most magnificent taste. We have fine models in the antique remains, and, I dare say, we are able even to out do them.

THE cornice given by PERRAULT to this order, has thirteen mouldings, and I made no alteration in the number, though I changed the two lower members, which were a fillet under the dentell, and an ogee underneath; instead of these, I made an ovolo, and the fillet under, uniting this to the freeze with a sweep. The principal character of this
cornice

cornice is, that it has both modillions and dentells: the modillions should be decorated with a leaf of the same kind, as is made use of in the capital of the column, whether acanthus, olive, laurel, or any other.

BEFORE I have done with entablatures, I must take notice of two things general to all, or most of the orders.

ONE is, the carving of the mouldings, in which I would have the ARCHITECT pay the same regard to propriety as in every other ornament. When columns are left plain and naked, no other ornament should be given to the mouldings (and in this, I include those belonging to the bases and cornices of pedestals) than their plain form, circular or angular, except in the modillions, which must in the *Corinthian* order always be adorned with a leaf, to be adapted to the capital: but if columns are fluted, &c. the entablature should be embellished by carving some of the mouldings; I say some only, and this should be strictly observed, for when the mouldings are all carved, it creates a confusion of ornaments that offends the eye; and though there are instances of it in the antique, we should avoid it as a fault, and intermix the mouldings plain and ornamented. The best method to do it, is to intermix them, circular and angular; whereby, if the order is plain, they are as distinguishably visible from each other, as if alternately ornamented; circular mouldings being, besides, fitter for being carved than angular ones.

THEREFORE, the fascias and listells of architraves, should always be left plain, cutting only the astragals, ogee and ovolo given to them, in such forms as is generally practised; the same must be observed in cornices, and also in bases of columns, which may be thus ornamented, though it is seldom done.

THE other thing I must take notice of, is the soffits of architraves, and of the corona in cornices.

THE soffit of architrave is frequently adorned with fret-work; this is very well, when the order is ornamented with flutings, &c. otherwise, it is best to leave it plain like the rest of the order.

IN cornices, where there are mutules or modillions, the soffit is of course divided into pannels; these should be cut hollow with mouldings in the *Corinthian*, but left plain in the *Composite* and *Doric* orders. If the orders are fluted and ornamented, these pannels should be filled up, in the *Doric* with roses or any other relievos, analogous to those in the metopes, and in the *Composite* and *Corinthian*, with roses or flowers whose leaves would be best, if cut to answer those of the capitals. However, this is not very material, on account of the situation of those ornaments, which are not easily perceived, and whose form, cannot of course, be minutely examined. But these pannels should remain naked and void of ornaments, if the order is plain.

I HOPE I have fulfilled the promise I made, of giving to every part of the orders a distinct character; for it will be easy, on viewing even the base of a pedestal, or the cornice or architrave of the entablature, detached and separate from any other part; to distinguish the order they belong to, by the character peculiar to each member.

C H A P. IX.

Of Intercolumniation.

IF the distance between the columns, whether in porches, porticoes, piazzas, or worked out of walls is too small, it will have a bad appearance, and will be an increase of expence by making more columns than there need be: if that distance is too large, the building will be wanting in solidity, and the entablature will not be able to bear much. It is therefore necessary to proportionate the intervals to the strength of columns in order to keep a medium between the two extremes, massiness and weakness.

THIS, at first view, may induce us to believe, that every order should have an intercolumniation of its own; without possibility of giving it with propriety, more or less distance between the columns.

BUT we should consider, not only the order, but also its situation, whether under an entablature bearing flat upon the column, or under arches turned up over them, whether close against walls or detached and at distance from them; and we should moreover, consider the nature of the materials we build with.

THE *Greeks* had but three orders, yet they knew of five modes of intercolumniation, which were settled by rules more positive and strict than any other part of the ordonnance of orders.

THESE intercolumniations were:

The pycnostyle, being a distance of one diameter and a half.

The systyle, - - - - - two diameters.

The eustyle, - - - - - two diameters and a quarter.

The diastyle, - - - - - three diameters.

The aræostyle, - - - - - four diameters.

THE *Doric* order being the most ancient, it is probable that the diastyle mode was first in use as fittest for that order, and, as its name means nothing more in the *Greek*, than *Intercolumniation*. But of all the five, the eustyle manner was the most esteemed, as its very name imports; and indeed, I think it the most graceful of all, especially for the high orders; and withall, well calculated for solidity, and of good proportions in regard to the correspondence that should be between the height and breadth of the opening.

PALLADIO gives to each order its particular intercolumniation according to its rank, beginning with the aræostyle for the *Tuscan*, and ending with the pycnostyle for the *Composite*. Nothing but a superstitious attention to rank and priority could have directed such rating: If PALLADIO had made use of his judgement, he would have perceived that the delicate and small capital of the *Ionic*, was fitter for a narrow intercolumniation, than the broad and massy capital of the *Composite*, which has a very ill aspect in the pycnostyle manner; and that even the *Corinthian*, on account of its greater projection, should have rather a larger intercolumniation than the *Ionic*. In general, PALLADIO treats these matters but very slightly, and he makes frequent blunders: he says, for instance, in speaking of the *Corinthian* order, "In the design of a colonade, the intercolumniations are two diameters, as in the portico of St. MARIA ROTUNDA in Rome." Yet, according

According to the designs he himself has transmitted to us, it appears, that the intercolumniation of that very portico, is no more than one diameter and a half. Thus are ignorant followers of PALLADIO misled by his errors, without possibility of rectifying them, for he gives rules and proportions, but never discusses their principles.

SCAMMOZZI, who argues still less, and is rather more positive in his rules, condemns without giving any reason for it, the intercolumniations of the ancients, and sets up his own in their place, these being however, partly taken and partly altered from them.

THE intercolumniation the most in use among the *Romans*, in temples, whether in the *Ionian*, *Corinthian*, or *Composite* order, was the pycnostyle, especially for the two last. This intercolumniation in some cases, may be eligible for the high orders, but in general it should be avoided; as a wider intercolumniation will fulfil the purpose of strength and solidity, will save expences by making columns less in number, and will have a much better aspect. But I shall now proceed to examine the matter with more regularity and in order.

A PORTICO of the *Tuscan* order, if built of stone, cannot well admit the aræostyle intercolumniation, because it is a matter of great difficulty, to make the architrave of a single stone long enough to reach from over the centre of one column to that of another, and, at the same time, preserve the strength it ought to have. Timber is, on that account, better than stone, but then it will not last so long; therefore, I think the diastyle manner more eligible, especially as besides that it diminishes the length of the stones cut for the architrave, and makes them consequently stronger; it increases also the number of props or supporters of the whole building; for where, in the aræostyle disposition, ten columns only would bear the whole weight, the diastyle will make room for twelve, and this intercolumniation is wide enough, for the opening will have in breadth three sevenths, which is near the half, of its height.

As columns worked out of walls are a great strengthening to buildings, and will (if not too far asunder) make a very thin wall as strong as one of twice the thickness would be without columns; the same intercolumniation of three diameters is very proper in this case for this order.

In porches, where columns in general support a pediment, and where there is always a door in the middle, the middle interval should be wider than those on the sides; and in that case, the diastyle being used in the rest, leaves room for the aræostyle in the middle; and this ordonnance will make a fine porch of four columns supporting a pediment.

BUT, in piazzas, which are galleries formed by arches supported by columns, pilasters, or piers, the opening being higher, requires wider intervals between the columns; and, as the archivolt is made of several stones, supported and kept together by their pressure towards the centre of the arch, this makes a stronger work than an architrave bearing flat on two columns, and consequently, can admit of an increase in the distance of its supporters; therefore, in this case, I would chuse the aræostyle intercolumniation.

WHEN columns are coupled, a wider intercolumniation should take place; but, as the ancients did not practise this manner, they could not leave rules for it: it is an improvement of the moderns*, which has a fine effect when judiciously made use of. However,

* It is an improvement of the moderns, so they say, a happy thought of which the ancients had not the least idea. I do not know that. There is a temple of *Bacchus* near *Rome*, now under the Vocabulary of *St. Agnes*, in which the cupola is supported by a double range of *Composite* columns, fifteen inches in diameter, standing two by two
I think

I think columns of the *Tuscan* order should not be coupled except in arched piazzas; since, when the entablature runs flat, it will not make it stronger over a large intercolumniation to join two columns together at the extremities of the distances. But, in piazzas, I should think five diameters as much as can be allowed to coupled columns of this order.

WHEN the ancients gave first triglyphs to the *Doric* order, they might be said to have put manacles on their hands: for (and to the shame of ARCHITECTURE be it spoken) that trifling ornament, insignificant as it is in itself, is become the rule of intercolumniation in this order. The main considerations in building, viz. strength and appearance have been subordinated to, and regulated by a useless moulding.

I WILL allow indeed, that the triglyphs should be so disposed, that one may stand directly over the centre of each column, and that their breadth should be a semi diameter; but, I cannot see why the interval left between, must be so necessarily square, as to influence the intercolumniation.

HOWEVER, so it is; the ancients bowed their neck to the yoke, and submitted to the tyranny of this law to such a degree, that some of them, and those very famous, avoided to build in this order upon several occasions on that very account, for fear of meeting in their way an obstructive triglyph or metope, with whom, there was no contending.

HERMOGENES, an ancient ARCHITECT, having got together a great quantity of marble for building a temple to BACCHUS, of that order, gave up his first design, and built it of the *Ionic* order, because he could not bring the intercolumniations to proper proportions; and, indeed, the several intercolumniations regulated by triglyphs and metopes, are most intolerably disproportioned in their progression.

ONE triglyph, and two metopes between the triglyphs over the columns, make but very little more than the pycnostyle distance, i. e. a diameter and a half, which is by much too narrow for this low order, since it is but seldom eligible, even in the highest orders.

Two triglyphs and three metopes, make two diameters and three quarters, which is the only *Doric* intercolumniation that can be used with any judgement and propriety in colonades; the first I mentioned being too narrow, and the next I shall give, being too wide.

THREE triglyphs and four metopes, will make four diameters, this is, as I said, too wide, even for a middle intercolumniation in a porch, where the sides have but two diameters and three quarters; and in an order higher than the *Tuscan*, to which we give in this case, three diameters interval in the sides, and four in the middle.

IF we go but a step further, we shall be lost indeed, for four triglyphs and five metopes, will make five diameters and a quarter.

THESE intercolumniations, all calculated from one order without proper gradations, will appear still more preposterous if we compare them with the five original intercolumniations of the ancients.

VITRUVIUS has been led by the same prejudice, that had perplexed others before him; else he would not, I believe, have laid down such rules for porches of this order, as he has done. He gives three triglyphs, which make four diameters, to the middle intervals, and only one, which is one diameter and a half, to the sides. I am surprized this

and so near, that there is but five inches distance between the extremities of the two capitals. This comes very near our moderns' coupled columns; indeed, those of this temple, are not coupled lengthwise, but depthwise: yet, I think I may propose this query, Whether this was not a lucky hint given the ancients to the moderns?

great master could be guilty of such impropriety and disproportion. Some among the moderns have been bolder. PALLADIO was the first who leapt over the bar, and he made no scruple to enlarge the metopes; not, as PERRAULT says, to make the middle intercolumniation in the portico of COUNT VALERIO's house wider than the other distances, for they are all alike: but to make a lesser intercolumniation between those columns that are across the portico and divide it in three parts; for here, he gives only two diameters distance, and it is impossible, that in such interval, there should be more than one triglyph and two metopes between the triglyphs standing over the columns; only these metopes, must, of necessity, be sixty minutes wide, and they are but forty-five in height*. Some other ARCHITECTS have taken the same liberty: and, in the name of common sense, where is the necessity or propriety to make the metopes absolutely square? I think it would have been better to make it a rule, that there should be but one triglyph in every intercolumniation of whatever kind it was, leaving the metopes wider or narrower, as the distance would have allowed it. This would have been, to proportion ornament to the strength, solidity, appearance, and convenience of the whole building, instead of proportioning all those to the measure of a trifling moulding of not the least use.

"BUT the ancients held this law sacred! it is done so in the antique!" will be the universal cry. A powerful argument I own; but I take such to be the touch-stone of true genius, and I revere PALLADIO more for this bold attempt which, if left to me, I might have been stoned for it, than for all his abilities,

To conclude, two diameters and three quarters, make (as I observed before) a good intercolumniation for this order in colonades, either against walls or open; a larger one in the middle, should not be above three diameters and a half; this last will do very well in arched piazzas, and even four diameters might be given, if no great weight is to be laid on the arches. Coupled columns under architrave may admit three diameters and a half, and four and a half or five at most if under arches.

To the *Composite* order I would give the diastyle, or three diameters, intercolumniation, in colonades, &c. on account of the greater projection of its capital, which certainly eases the architrave, and supports it better than the two lower orders, by extending further towards the middle of the distance. But, in frontispieces, where a porch under a pediment is to be erected, I think the eustyle distance in the sides, and the diastyle in the middle, to be preferable: yet, if a wider front is required, it may have a very good effect with the diastyle in the sides, and the aræostyle in the middle. In arched piazzas, I should never give it more than the diastyle, for here the great projection of the capital is of no service, since the archivolt cannot bear beyond the diameter of the column at top.

If the columns of this order are coupled, three diameters make a very good distance for colonades, and four for piazzas.

For the *Ionic* and *Corinthian* order, in open colonades if they are to support a great weight, such as one or two stories above, the systyle intercolumniation, which is two diameters, would be preferable; but if only a ballustrade and uncovered gallery, or a roof is intended at top, the eustyle will have a better effect: against walls, this last manner is still more eligible than the systyle, on account of windows, which would be too narrow if only two diameters were left between the columns. Where a middle intercolumniation

* *Palladio* enlarged also the metopes on another occasion, if his draughts are exact. In the porch of the country house belonging to the *Counts Pisani*, at *Bagnolo*; the sides intercolumniations, have the common measure of one triglyph and two square metopes; the middle one, which has no more than one triglyph and two metopes is two diameters, on account of the metopes being wider in this than their square.

must

must be wider it should not be any thing more than diastyle, or even eustyle, if the rest can possibly be systyle. These orders are not on account of their height very proper to bear arches unless coupled, and then three diameters and a half would be wide enough. I should give them three, when coupled under architrave.

HOWEVER, all the above intercolumniations are meant for stone work. If timber is used it may give room for wider intercolumniations, which must be settled by the consideration of the weight the orders are to bear.

IN the *Corinthian* and *Composite* order, which have modillions in the cornice, care should be taken after we have fixed the intercolumniation, that they should be properly disposed: we should no more settle the intercolumniation by the position of modillions in these orders, than by that of triglyphs in the *Doric*; modillions are no more essential in ARCHITECTURE than triglyphs, they are only ornamental, and when omitted, the omission is not an error of judgement. Intercolumniation, on the contrary, is a very material point, since it determines the solidity and appearance of the whole: therefore after this point is settled, and not before, we are to look that the modillions are not disposed in an irregular manner.

THE usual method is to place three over each column, the middle one over the centre exactly, and all the intervals of the same length. But this continued, will seldom bring three plump over each column. Some, on this account, have put only two over each column, and continue them two by two, with two different distances; there are even in the antique, instances of modillions being irregularly disposed; as in the portico of the ROTUNDA. However, I do not mention this as an authority to do the same: faults should be avoided, though found in the practice of the best masters; I only mean to shew how immaterial in itself is the disposition of this little ornament. That it is nothing more than ornament, is very plain; consequently, no other rule should be given for their disposition than this. To dispose them in such manner as will appear regular, either two by two, three by three, at equal distance from each other, or at any distance whatsoever, provided it is done symmetrically. And this can be effected either by making the intervals wider or narrower, or the modillions themselves bigger or lesser according to convenience.

THERE is another point relating to the disposition of modillions, which requires I should make some observation upon it. I mean the manner of disposing the modillions in a pediment: we find them in all the antique remains, made perpendicular to the horizon, instead of being made parallel to the declivity of the cornice; and PALLADIO tell us they must be so. But since no-body has given us any reason for this method, I shall try to guess at it.

A PEDIMENT is the representation of the end of a roof, and modillions in pediments represent the ends of the purlins, which are always laid parallel to the declivity; why then should modillions be made perpendicular to the horizon? Because it is so in the antique. An admirable reason to be sure, to consecrate an impropriety! For my part I think it owes its origin to the blunder of some ARCHITECT, who perhaps out of obstinacy pretended afterwards it should be done so; his disciples may have taken his word for it, and observed that practice, and succeeding ARCHITECTS without considering its principles have followed the same method. However, some among the moderns have paid little regard to that rule, and have placed the modillions parallel to the declivity of the pediment, which I think both natural and according to propriety.

I HAVE particularly applied the pycnostyle mode of intercolumniation to no order, though frequently used by the ancients, especially in temples.

THE temples of the ancients were generally without windows, a gloomy obscurity being reckoned fitter for the mysterious rites of religion than a great light; therefore it was proper

per to place the columns as near each other as possible, in order to hide walls, which being without opening would have had a very disagreeable aspect if left naked, and this made the pycnostile intercolumniation very eligible in temples. It was also highly proper in galleries, such as surrounded most of the squares, courts, markets, &c. of the ancients, in countries where it was of consequence to make all places of public resort, as much shaded from the sun as possible.

WE build on different principles: our churches must be extremely well lighted, as well as our houses. The sun warms our walls, and its rays are very beneficial to the inside of our buildings; therefore we should take care not to obstruct its influence, nor darken our abodes by colonades and porticoes before our houses, and if in some cases we erect them, we must make them as airy and open as the nature of the orders will permit. This consideration will render the pycnostile intercolumniation useless in our climes, except in a very few cases where on particular occasions it may be proper.

C H A P. X.

Of Arcades between Columns.

BESIDES the intercolumniations I have treated of, in the foregoing chapter, there is another disposition of columns which requires that the intervals between, should be settled by other rules: I mean when arches are made on pillasters or piers, between columns, and under their entablature.

THIS is a very nice point and which requires great attention: those arcades should be proportioned both in their height and in their breadth to the orders of the columns, and their several parts as pillasters, imposts and archivolt, are also to keep proportion with the whole.

SCAMMOZZI has taken great pains to settle this matter, and yet I do not find he has done it with any proper progression between the orders: besides, his calculations are so confused and so intricate, that few persons can understand them clearly, without a great deal of labour and study; and his reasons, if he had any, for making his proportion as they are, rather than otherwise, being always kept to himself, it is impossible to find out the principles of his opinions. Therefore, I have thought it better to look into those things myself, in order to explain them, and establish for my own practice, an easy and sure method of proceeding.

AND first, it appears that these arcades should be wider in proportion of their height, in the lower orders than in the higher. The similitude this case bears with that of entablature, made me try the experiment, to see whether by making the arches of the same breadth in every order, their height being of course more or less, it would not answer the end proposed.

BEFORE I proceed I should observe, that a difference must be made between columns standing upon pedestals, and those that stand only on a low basement; this divides the orders in two classes, the first of columns without pedestals, and the second of columns upon pedestals.

To

To the first class, I give five diameters intercolumniation, and to the second class I give six, in all orders.

IN order to make every part of the arcade of proper proportions, in both classes and in every order, I divide the height from the ground to the soffit of the architrave, in twenty parts; of these, I give thirteen for the height of the pier or pilaster and its impost, and seven to the arch and so much of the wall that must remain naked between the archivolt and the architrave. For instance,

THE height from the ground to the soffit of the architrave being in the *Corinthian* order of the first class, twenty-nine modules of twenty minutes each, which is the height of the column, I divide it into twenty parts, which of course have twenty-nine minutes each.

THE thirteen parts given to the pier and impost (being in all 377 minutes) I reduce into twenty-nine supposed modules, in order to find the proportions that the archivolt is to bear to this pilaster, which should be the same that architraves bear to columns. Therefore, I divide 377 minutes by 29, and the produce will be 13, so that these supposed modules of twenty supposed minutes, have each thirteen real minutes. This done, I allow about forty supposed minutes, for the breadth of the pier or pilaster that is to appear from behind the columns, and thirty-six supposed minutes for the breadth of the archivolt. The forty supposed minutes are equal to twenty-six real minutes, and the thirty-six to about twenty-three.

THIS operation serves for all the orders in the first class; as for the second class, the operation must be repeated in every order, because the pilasters rise from order to order, of two supposed modules, and the columns in the second class rise from order to order of three real modules, which of course makes a difference.

BUT to make it easy, I will give in the course of this chapter, tables of all those proportions, which have been calculated with the utmost care, and may be depended upon for exactitude.

As the arcade ought to keep in regard of its several members, as well as in regard of its height and breadth, proportions suitable to the order it is annexed to, its arch ought to be lower in the low than in the high orders, and as they are, of the same breadth in all the orders, if the highest are made of a semicircle, the lower should be elliptical: this will appear an innovation, but I have and give reasons.

If in a *Tuscan* arcade, I make the arch a semicircle, I must make the opening narrower than in the higher orders, since the space given for the height of the arch is lower, and this will break the proportion kept between the height and breadth of the opening; or if I give the same height to the arch, in order to have the opening of the given breadth, it will make the arch higher than it ought to be in proportion of the pilaster that supports it, which must be made lower if I make the arch higher, as the height allowed for the whole is fixed by the height of the column under the entablature. If to bring this to bear and the arch to be a semicircle, I alter the intercolumniation, I step further out of the right path, since it will be productive of the same inconveniency as the first attempt, that is to say, it will make the arch too narrow in proportion of its height, and will moreover break the proportion of intercolumniation, by giving to this low order, an interval as narrow in proportion of its height as to the superior orders. Therefore having well weighed the matter, I found no ways would answer so well as that I have put in practice, which is of making the arches elliptical in the low orders, the ellipsis having more or less curve, as they in other points proceed progressively from the circular arches; and this method has another propriety, which is this:

THE

THE proportions or progressions to be kept between the orders, are by this method preserved even in the curve of the arches; the lower ones having a lesser curve than the higher: for in the two higher orders, where in both, the arch is a semicircle, there is proportion kept even in this point, as by placing the centre more or less above the level of the top of the impost, it gives the arch a kind of parabolical form, higher in the *Corinthian* order than in the *Ionic*, and of course the arch has more curve in that, than in this last order.

It is not within the compass of my work to enter into a particular examination of the propriety of arches, whether circular or elliptical: therefore I will offer here no argument to demonstrate, that on account of strength no objection can be made here to an ellipsis; I will say only that I believe no artist will dispute, that an elliptical arch well calculated is able to bear as great weights as a circular one.

It being necessary to fix the centre of the arches, whether an ellipsis or a semicircle, somewhat higher than the level of the impost, on account of its projection which otherwise would obstruct the view of part of the arch; I give the height added to raise it to the couffinet, which is the first stone whence the arch springs, and which must bear flat and horizontally upon the impost. Therefore I give to the couffinet, part of the spare height upon the whole, the other part being given to the naked of the wall, above the archivolt and between that and the architrave: it must also be observed, that the stone called the couffinet, must besides the height I allow it in the table, make part of the arch, and should be made higher; only from the point of the height given in the table the sweep begins, and its upper surface must be cut sloping towards the centre: however, the mouldings of the archivolt, viz. the fascias of the orders, &c. must be continued on the perpendicular part of this couffinet to the bottom bearing on the impost.

THE impost I make of the same height in all orders, whereby it keeps good proportions with the rest; the heights I give this member in both classes, are,

In the first class, twenty-seven minutes, being

In the <i>Tuscan</i> order	a tenth of the pillaster	} as near as possible.
In the <i>Doric</i>	an eleventh	
In the <i>Composite</i>	a twelfth	
In the <i>Ionic</i>	a thirteenth	
In the <i>Corinthian</i>	a fourteenth	

In the second class, I give forty-five minutes to the impost, which is

In the <i>Tuscan</i> order	about a seventh of the pillaster
In the <i>Doric</i>	about an eighth
In the <i>Composite</i>	about a ninth
In the <i>Ionic</i>	about a tenth
In the <i>Corinthian</i>	about an eleventh.

ALL these proportions will be better understood by the following tables, which are very exact, notwithstanding I have been obliged, in order to avoid fractions, to give a minute or so, more or less to some members.

TABLES

TABLES for Arcades of the first Class, viz. those erected under the Entablatures of Columns without Pedestals.

FIRST TABLE.

For the *Tuscan* order.

Height 21 modules, breadth 15 modules.

Height.	Real Modules.		
Pillaster	—	—	12 6 minutes
Impost	—	—	1 7
Couffinet	—	—	0 9
Semi-ellipsis	—	—	5 0
Archivolte	—	—	1 3
Naked above	—	—	0 15
Modules			21 0

Breadth.

Two pillasters each projecting 26 minutes	—	2 12 minutes.
Opening	—	12 8
		15 0

SECOND TABLE.

For the *Doric* order.

Height 23 modules, breadth 15 modules.

Height.	Real Modules.		
Pillaster	—	—	13 12 minutes.
Impost	—	—	1 7
Couffinet	—	—	0 12
Semi-ellipsis	—	—	5 10
Archivolte	—	—	1 3
Naked above	—	—	0 16
Modules			23 0

This part of the table will serve for all the orders in this class.

THIRD TABLE.

For the *Composite* order.

Height 25 modules, breadth 15 modules.

Height.	Real Modules.		
Pillaster	—	—	14 18 minutes.
Impost	—	—	1 7
Couffinet	—	—	0 15
Semi-ellipsis	—	—	6 0
Archivolte	—	—	1 3
Naked above	—	—	0 17
Modules			25 0

FOURTH TABLE.

For the *Ionic* order.

Height 27 modules, breadth 15 modules.

Height.	Real Modules.		
Pillaster	—	—	16 4 minutes.
Impost	—	—	1 7
Couffinet	—	—	1 2
Semicircle	—	—	6 4
Archivolte	—	—	1 3
Naked above	—	—	1 0
Modules			27 0

FIFTH TABLE.

For the *Corinthian* order.

Height 29 modules, breadth 15 modules.

Height.	Real Modules.		
Pillaster	—	—	17 10 minutes.
Impost	—	—	1 7
Couffinet	—	—	1 13
Semicircle	—	—	6 4
Archivolte	—	—	1 3
Naked above	—	—	1 3
Modules			29 0

TABLES for Arcades of the second Class, viz. those erected under the Entablatures of Columns standing on Pedestals.

FIRST TABLE.

For the *Tuscan* order.

Height 26 modules, breadth 18 modules.

Height.	Real Modules.	
Pillaster — — —	14	13 minutes.
Impost — — —	2	5
Couffinet — — —	0	15
Semi-ellipsis — — —	5	19
Archivolte — — —	1	7
Naked above — — —	1	1
Modules		26 0

SECOND TABLE.

For the *Doric* order.

Height 29 modules, breadth 18 modules.

Height.	Real Modules.	
Pillaster — — —	16	12 minutes.
Impost — — —	2	5
Couffinet — — —	1	1
Semi-ellipsis — — —	6	11
Archivolte — — —	1	8
Naked above — — —	1	3
Modules		29 0

Breadth.	Real Modules.	
Two pillasters each projecting		
34 minutes — — —	3	8
Opening — — —	14	12
Modules		18 0

This part of the table will serve for all the orders in this class.

THIRD TABLE.

For the *Composite* order.

Height 32 modules, breadth 18 modules.

Height.	Real Modules.	
Pillaster — — —	18	11 minutes.
Impost — — —	2	5
Couffinet — — —	1	10
Semi-ellipsis — — —	7	0
Archivolte — — —	1	9
Naked above — — —	1	5
Modules		32 0

FOURTH TABLE.

For the *Ionic* order.

Height 35 modules, breadth 18 modules.

Height.	Real Modules.	
Pillaster — — —	20	10 minutes.
Impost — — —	2	5
Couffinet — — —	2	2
Semicircle — — —	7	6
Archivolte — — —	1	10
Naked above — — —	1	7
Modules		35 0

FIFTH TABLE.

For the *Corinthian* order.

Height 38 modules, breadth 18 modules.

Height.	Real Modules.	
Pillaster — — —	22	9 minutes.
Impost — — —	2	5
Couffinet — — —	3	0
Semicircle — — —	7	6
Archivolte — — —	1	11
Naked above — — —	1	9
Modules		38 0

THE key stone should be in its narrower part as wide as the archivolt. That stone is a supporter to the main architrave, and must consequently project forward, in order that its upper part may support all that projects of the architrave beyond the naked of the wall. This stone should have mouldings appropriated to the order, and more or less ornamented as the order require by being either plain or ornamented; sometimes it is made to represent a head. But regard in this point must be had to propriety.

As to the placing doors, windows and niches, in these arcades, it is needless to give any directions, their place being marked by the height of the imposts. The taste of the ARCHITECT and his judgement must be his only guide, let him only adapt these things to the orders, and take care not to offend propriety.

THE breadth of the whole piers will, by the foregoing proportions, be in the first class, something better than nine twentieths of the opening, and in the second, very near four ninths, which in both classes is almost half the opening.

It may be adviseable in some cases, to make the arcades wider, either on account of a larger opening being required, or by making an upper order of a smaller module than the under one. In this last case, as the upper columns must stand directly over the under ones, their intercolumniation must of course be larger; but the arcade may preserve the same proportions, giving only more breadth to the piers above than is given by the table. For instance, in a building of two orders, *Doric* and *Ionic*; the lower order has thirty inches in diameter, which makes the minute half an inch: by the table of the first class the opening of the arcade will have ten feet four inches, and the whole pier four feet eight inches. The upper order being made less than the lower, its diameter will be, we will suppose, only twenty-four inches; this according to the tables of the first class, will make an opening of eight feet three inches and one fifth, and of course the pier will be six feet eight inches and four fifths; so that the side pillasters of this upper order, which according to the tables should be only twenty-six minutes or ten inches and two fifths wide, must be seventy-one minutes, being twenty-eight inches and two fifths; the whole pier, in such arcade, will be something more than three quarters of the opening, which is no bad proportion. But if it is thought too much, the difference may be divided between the opening and the pier, provided the opening be not quite so large as that of the order underneath.

To make the opening wider, will require some alteration in the table, and perhaps it will be proper, instead of giving thirteen parts of the whole height of the pillaster and seven to the arch, &c. to give thirteen and a half or fourteen to the pillaster, in which case the ARCHITECT must make another table by the same operation I made mine, and of which I gave an account in the beginning of this chapter.

C H A P. XI.

Of Pillasters.

PILLASTERS, being square columns, which occasionally are made use of instead of round ones, and are sometimes placed upon the same line and under the same entablature, they ought of course to have the same proportions and the same ornaments.

IT would therefore be a tedious repetition of what I have said already, to give a particular description of pilasters according to their order, and very few observations will complete all that is requisite on this subject.

PILASTERS not having their origin in trees left in their natural form and shape, but in beams erected to support the roofs or strengthen the walls of buildings, their shaft must of course preserve the form of those beams, and be like them of the same breadth all the way up, from the base to the capital without any diminution; yet this is but a general rule, which like that of the diminution being essential to columns, may be dispensed with occasionally, without breach of propriety; because it would have been no ways unnatural to make timber beams which were the first pilasters, with a diminution in their breadth, in order to make them side with columns.

INSULATED pilasters, are seldom found in the antique: however they may have a good effect in the extremities of porches, on the same line with the columns; and then they must undoubtedly have the same diminution.

PILASTERS annexed to walls, whether they have only one face or more free from the wall, should be diminished on that side which answers to a column standing either before them or on the same line. Those that have two faces clear of the wall, should be diminished on both sides, if one must be so in order to preserve uniformity; for the same reason those that have three faces free from the wall, should be uniformly diminished on all sides, if one requires diminution: and finally, pilasters that stand on a line with any pilaster diminished, should likewise be diminished in the same manner.

PILASTERS with three faces clear of the wall, are hardly eligible on any occasion, except at the extremities of porches that are closed on the sides by walls, such as we see before the church of *St. Paul, Covent-Garden*.

THOSE placed at the corners of buildings, and whose two faces make the angle, have not in my opinion so good an effect as when the angle is made by the naked of the wall, with two pilasters near the corner: it seems poor and as if the wall was not thicker than the pilasters; indeed it saves some work, and consequently expence, but not enough to be a matter of consideration.

THE projection that is to be given to those pilasters, so immersed in the wall that one face only is entirely clear, is to be regulated by the nature of the building: if the wall between the columns and under the architrave is not loaded with ornaments of great projection, their projection will be sufficient if between an eighth and a sixth of their breadth. But if there are archivolt, impost, or any thing of great projection, the pilasters must project beyond all those.

PROPRIETY may require that pilasters should be fluted; in this case it must be observed, that the flutings be by odd numbers on each face: five channels to the *Doric* and *Composite*, and seven to the *Ionic* and *Corinthian* will be the best method.

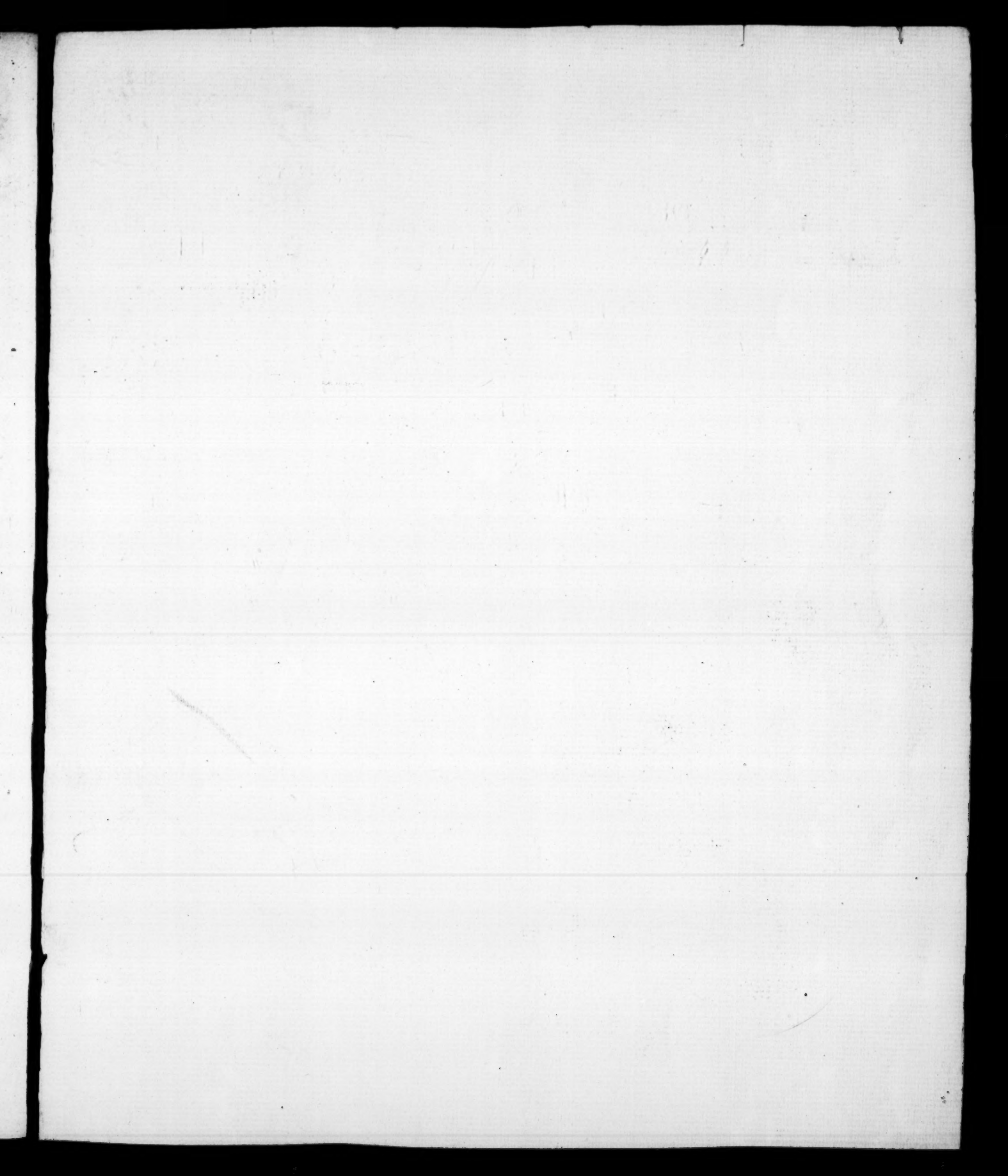
THE capitals of pilasters being larger than those of columns, some attention must be paid to those of the *Composite* and *Corinthian* orders.

As the number of leaves in those capitals, must be the same as in the capitals of columns, their disposition must be somewhat different.

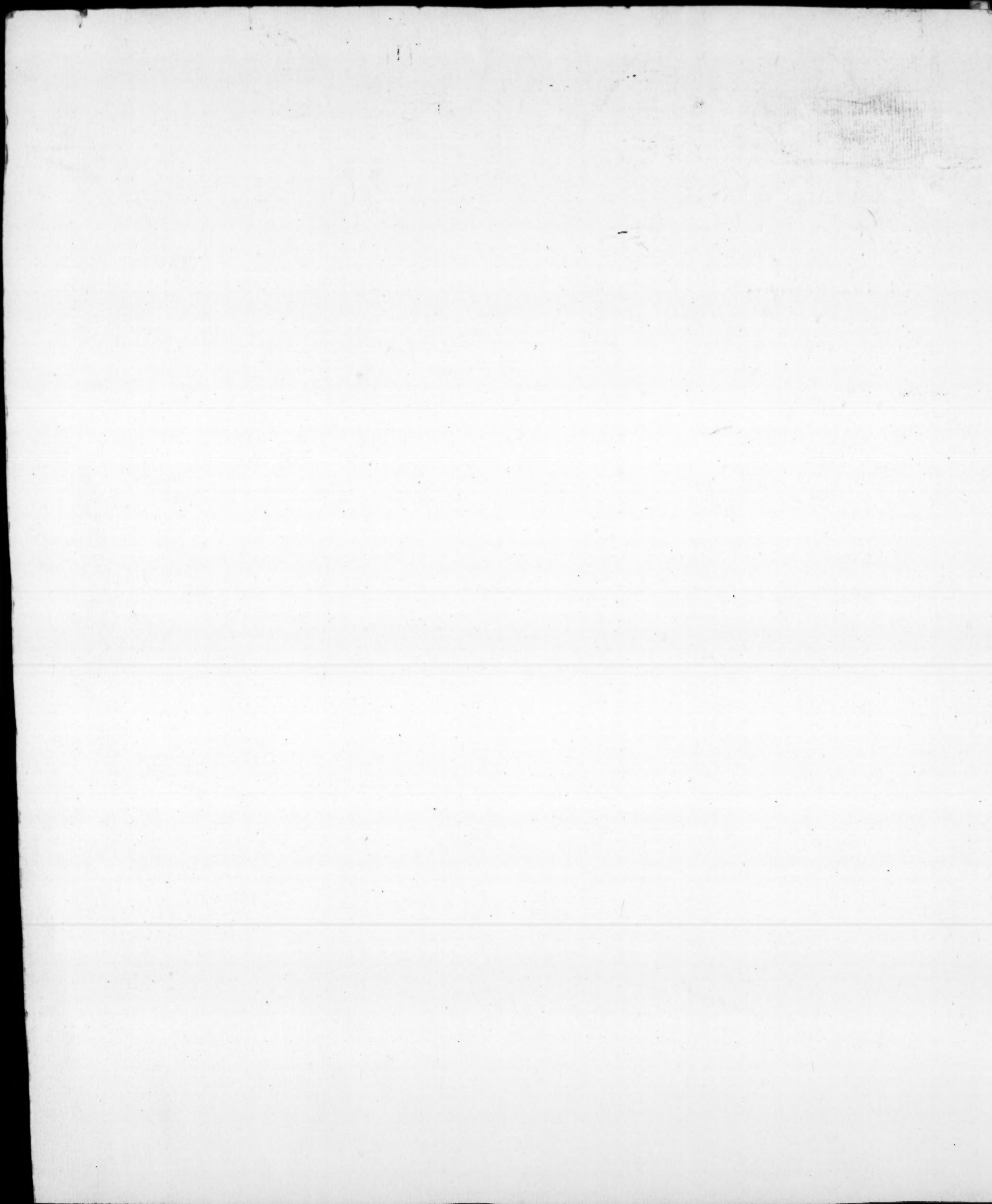
THEIR leaves must be wider, the lower row must have two leaves in front, and the upper row one in the middle and two half leaves on the sides, folding back right upon the angle.

THE rim of the basket or bell, in these capitals, should be a little circular and prominent in the middle, but the lower part quite a strait square.

C H A P.







C H A P. XII.

Of False, and Composed Orders.

BESIDES the five great orders of columns, the ancients had other orders, which they used where they could not allow height enough in buildings for any of these. They are called the *False* or *Bastard* orders; and are,

THE *Attic* order, consisting only of pilasters made higher or lower as occasion requires: they are placed over a great order, and make the upper story of a building; their use has given the name of *Attic* story, to the little story built generally at the top of houses, though not always adorned with pilasters. Their entablature is irregular; sometimes only a cornice, sometimes an architrave and cornice without a freeze, and its composition perfectly arbitrary. They are not fluted, but when the columns or pilasters over which they stand are fluted, the *Attic* pilasters should be pannelled, something in the manner of pedestals.

THE next is the *Caryatic* order; this is, figures of women standing instead of columns, under an entablature that rests over their heads. They were originally made to represent figures of captive women, natives of *Carya*, and thence came the name of the order; but other figures have been erected, and are called *Caryatides*. Their entablature is entirely arbitrary, and submitted only to propriety like the use of the order itself. When properly applied, it has a fine effect and is very rich: I think it a handsome decoration for chimnies and doors in large apartments, such as galleries, ball-rooms, &c. if those apartments are adorned with ornaments of the *Corinthian* or *Ionian* order; and in this case, the entablature of the *Caryatides* should be of the same order. I intended for this work, a plate shewing the effect of *Caryatides* in a door and a chimney; but as this is not very material and nothing new, I have suppressed it; and, in lieu of it, I shall give another plate more essential, of which I shall speak in its proper place.

IN churches, theatres, halls, &c. if *Caryatides* are made use of, they should be sim-
bolical figures, properly adapted to the building; in apartments, the antique *Caryatides* may be copied, if the other decorations are copied from the antique.

THE third of the *False* orders, is the *Persian*, being originally figures of *Persian* men slaves. These are somewhat shorter in general than *Caryatides*, on account of women being generally of a more slender shape, which makes them appear taller; therefore the *Persian* order is reckoned heavier than the *Caryatic* and the *Greeks* gave it generally on that account a *Doric* entablature. To shew the effect of this order, I give here part of the section of a chapel I designed for a palace, and of which it is proper to give here some description.

THE great order, is *Ionian* columns on pedestals, as much ornamented as that order can be without being overloaded, the freeze is imitated from that of the temple of *Fortuna Virilis*; and I have substituted to it cupids and ox-sculls, cherubs' heads and chalices, and to the garlands of fruits and flowers, palm garlands. Over this order is the gallery, where instead of columns, I made use of the *Persian* order; these figures support the vault, and by their solemn aspect they suit well the holiness of the place, and are proper emblems of
servent

fervent piety and devout attention to the sacred rites, being intermixed of two attitudes one with hands joined looking upwards, the other with his hands across his breast looking sideways downward towards the altar. Thus I think this order may be applied to many purposes, provided propriety rules the judgement of the ARCHITECT. It would be well adapted to the majesty and solemnity of a senate-house, hall of justice, and such other edifices.

BUT care should be taken, to use this order as well as the *Caryatic*, only in the inside of buildings, for it is seldom proper for the outside; not, but that they would have a fine effect of themselves, if used instead of *Attic* pilasters for the upper story of a building, and above one of the great orders. But then we must consider, that a building of an ordonnance rich enough to admit either of these instead of the *Attic* order, ought to be adorned with statues over the balustrades; and, it is a great impropriety to place statues over human figures, as it would make them look like performers of equilibrium feats.

WHEN the *Attic* order is not rich enough, the ARCHITECT may compose some low order, adapted to the richness and the nature of the building.

COMPOSED orders, are then capable of endless variety; but this should be limited to the false orders: as to the five great orders, they ought not to be denatured by compositions from them, if we intend to preserve them, as handed down to us by the ancients. Yet, attempts have been made at creating new orders from these: what is called the FRENCH ORDER, is properly a composition from the *Corinthian*, whose proportion it retains; but, the capital is decorated with flowers de luce and cock's heads, instead of leaves and stalks: a very odd and improper assemblage I think, and quite unnatural. The SPANISH ORDER is nothing more than carving a lion's-head in the middle of the abacus, instead of a rose. All these attempts shew more vanity than judgement. There is in PALLADIO, an instance of such composition in an antique remains, viz. The temple of MARS, *the Avenger* built by AUGUSTUS, but he does not vouchsafe to say a word about it; the plate eleventh in his fourth book shews it. It seems made in the *Corinthian* proportions: the base is the *Corinthian's* exactly; the shaft is fluted in a very extraordinary and gaudy manner, the channels are very small and in the usual number, and upon the listels, which, of course, are very large, there rises a round moulding of the same size with the channels. The capital has a row of ten leaves of the olive kind; over them, a winged horse springs from the foliage at each corner, rests with his fore feet on the row of leaves, and supports with his head the corner of the abacus, which is the same as in the *Corinthian* capital, and has a rose in the middle like it.

THIS composition, which was, as we may suppose, an attempt at out-doing all former out-doings, has had however, no better success than the flowers de luce and cock's-heads, and do not deserve the name of order, much less to be considered as a particular order, since it is the proportions, and not the ornaments only, that can make any composition an order different from those that are known.

I SHALL have occasion in the next chapter, to treat of the propriety of introducing new orders, and of what is necessary to constitute them as such.

C H A P. XIII.

Of further Proprieties to be observed in the Use of Orders.

THE preceding chapters have been mostly filled with reasons of propriety for the direction of the ARCHITECT in the ordonnance and execution of the orders; and indeed, the intent of this work is chiefly to introduce propriety, as the golden rule of ARCHITECTURE: it comprehends all other rules, and all other rules are submitted to this.

OF course, I have been obliged to treat often of the use of orders, in speaking of their ordonnance, &c. therefore, what I have said on that subject, I will not repeat in this chapter, which is a kind of supplement to the rest, and a conclusion of the whole system.

To decorate a farm-house or a barn with columns, would appear and would indeed be ridiculous, though such work might be an admirable master piece: as such I might praise it, but of such I should not approve. Columns, should not in general be used, but for such buildings, as are either the residence of persons of rank, or appropriated to some public service; such as churches, halls, both for the distribution of justice and the transaction of the business of corporations or companies of traders, markets, merchant's exchanges, &c. Or if employed in common houses, it should be universally, that is, as ornaments to whole streets or squares, and not as the embellishment of the house-keeper's dwelling, it should be done with uniformity and a proper choice of orders; observing that it would be a gross impropriety, to give to a row of tradesmen's houses a front which might be mistaken for that of a palace. I would therefore, avoid in such cases, rich orders and all distinctions, such as pediments, wings, &c. making the whole row from one end to the other, of the same height, projection, and intercolumniation.

I MADE a promise somewhere, that I would enter into the merits of a *law* called *inviole*, which is that of placing the orders one upon the other according to their rank, and I think this the properest place for the performance of my promise.

PALLADIO expresses himself thus. "The orders must be so disposed, that the strongest and most substantial be always undermost; for then it will be better able to sustain the whole weight, and the building will stand on a firmer foundation; the *Doric*, therefore must always be under the *Ionic*, the *Ionic* under the *Corinthian*, and the *Corinthian* under the *Composite*." He afterwards allows the *Tuscan* to be sometimes put under the *Ionic* instead of the *Doric*, and this last, under the *Corinthian* instead of the *Ionic*. SCAMMOZZI is more difficult, he will have them taken as they are in rank, without substituting one to the other: the *Tuscan* cannot be directly under the *Ionic*, nor the *Doric* under the *Corinthian*.

ANOTHER *law* will have the upper order less in its diameter than the under one; and this, I think of much more consequence than the other; and, though I shall shew in this chapter, that a different practice may be necessary and rendered proper in some cases, yet, I hold it in general with all ARCHITECTS, that columns at top should be less in their diameter than those at bottom.

THIS

THIS point being established, what will become of PALLADIO's specious argument? Which is the strongest and most substantial column? That which is put undermost without doubt, of whatever order it might be. Let us suppose a building of two orders, as the *Doric* and *Corinthian* for instance, since PALLADIO allows they may go together: the *Doric* order being undermost, will have three feet in its diameter, and of course, twenty three feet in height besides its entablature, which will make the whole order twenty-nine feet; the *Corinthian* order being made less a quarter less I shall suppose (according to the opinion of VITRUVIUS) will have two feet and a quarter in its diameter, which makes the column twenty-one feet nine inches, and the entablature above, four feet and a half more; this makes the lower story twenty-nine feet, and the upper one twenty-six and three inches. If on the contrary, I place the *Corinthian* order undermost, that column will be twenty-nine feet, and with the entablature thirty-five; the *Doric* being placed above, will be according to the same reduction of a quarter of the diameter, seventeen feet and three inches, and with its entablature, twenty-one feet nine inches high.

Now let us examine which is the heaviest and most substantial of these columns, in proportion of the weight they bear.

THE *Doric* order in the first case, bears an order only about a ninth less in height than itself, and a quarter less in its diameter.

THE *Corinthian* order in the second case, bears an order only about three fifths of its own height, and a quarter less in its diameter.

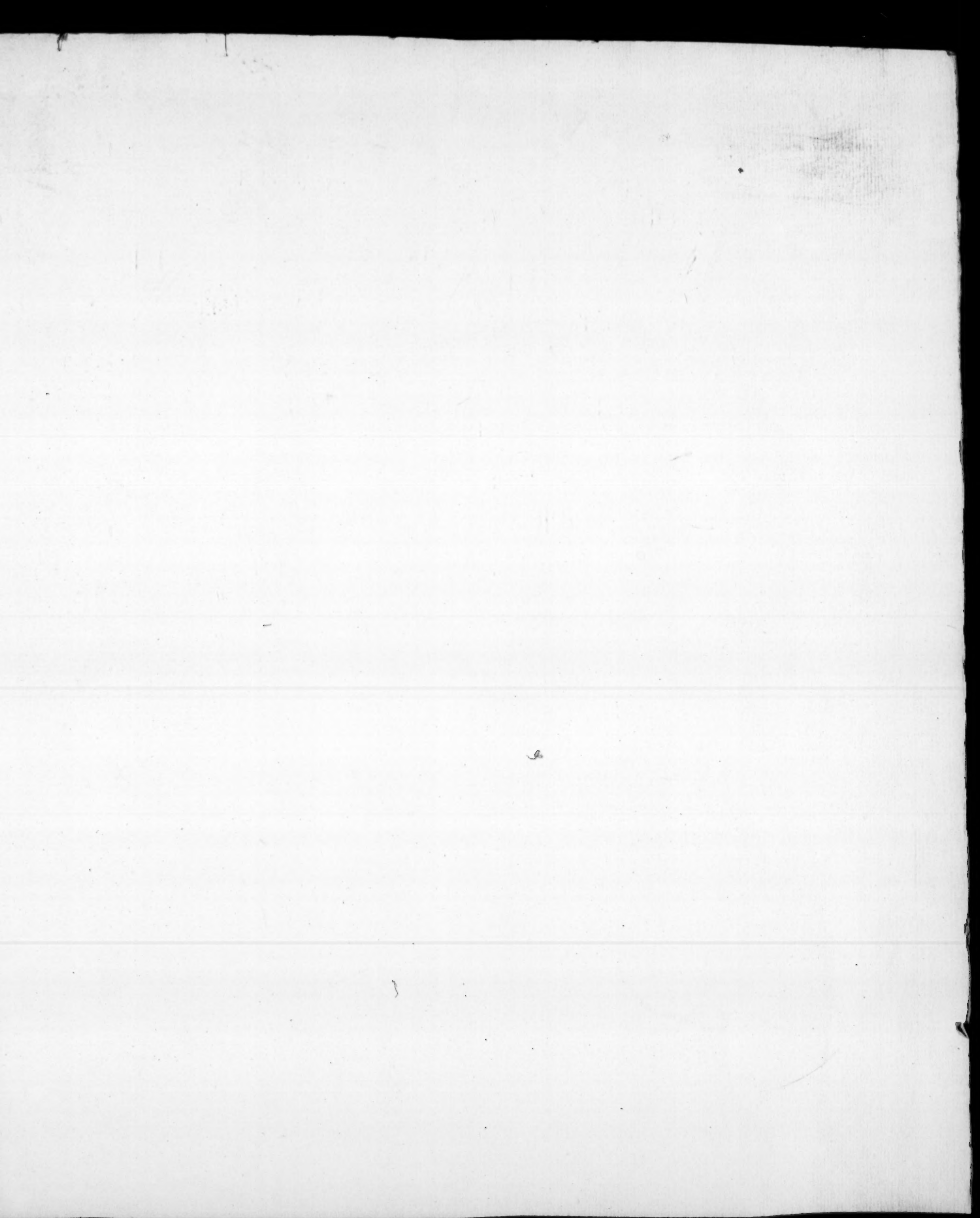
WHICH of the two orders has the heaviest load to bear? And which of the two is the most substantial, in regard of the weight laid upon it?

THIS is so obvious, that it is not surprizing it was the opinion of VITRUVIUS to make the upper order a quarter less in height, as well as in diameter, than that at bottom; which could not be done otherwise, than by putting a low order above a high one; for if we put instead of the *Doric*, the *Ionic* above the *Corinthian*, it will be about a quarter less in height, as well as in diameter.

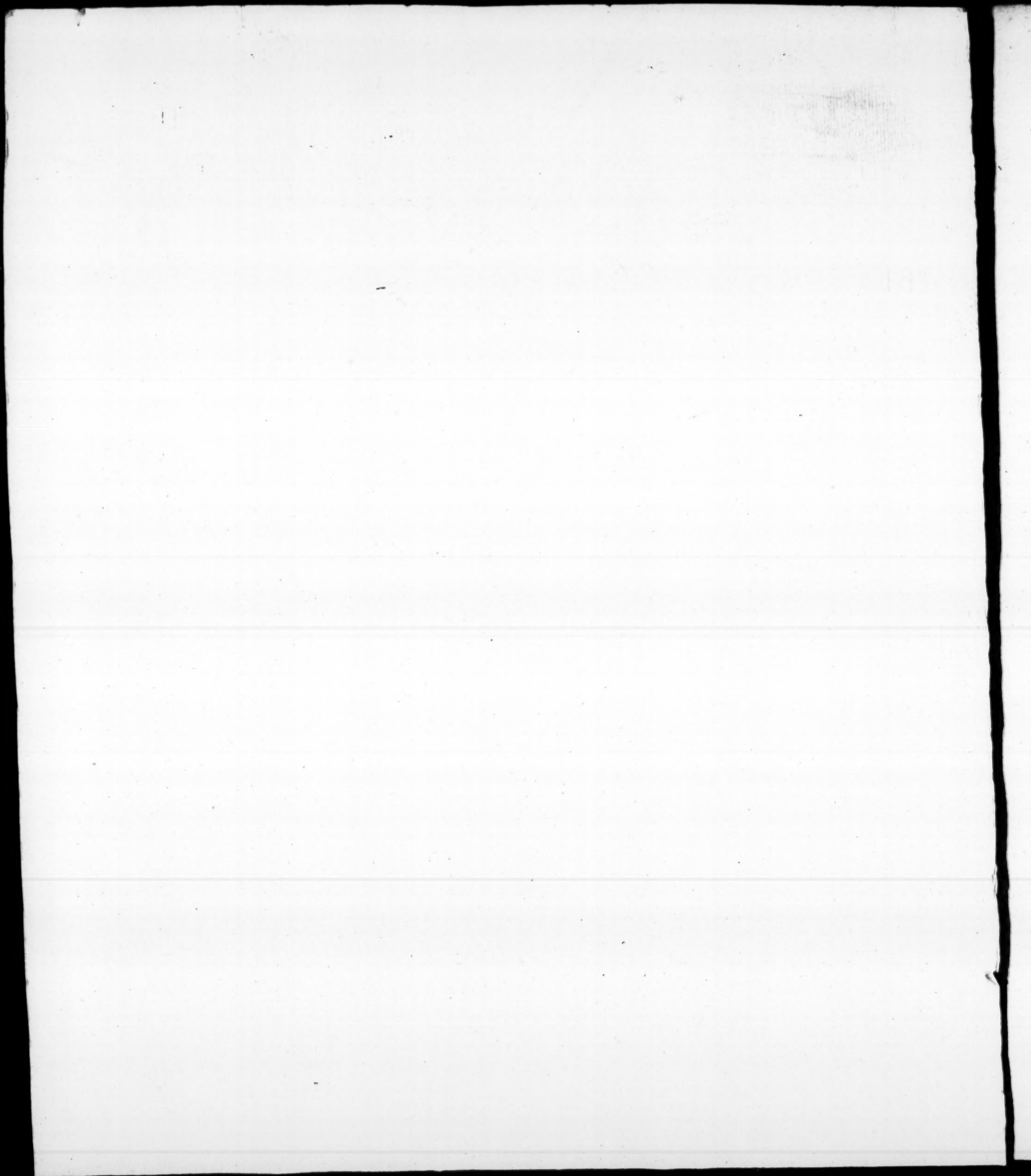
It appears by the above considerations, that both methods are eligible on different occasions; and the nature of the buildings ought to determine the choice.

IN a church, especially if a cathedral, the great order, if two are employed, should be the superior order and placed undermost, even with the pavement of the church; above that, a lower order made still less in height by the reduction of its diameter, will have a very good effect, and will never offend a judicious eye by appearing a substantial order over a delicate one. According to that method, the *Doric* will do very well in a church over the *Corinthian*; the *Tuscan* would also have a good effect, if its excessive plainness was not an objection: it would do better over the *Ionic*, if not ornamented by flutings; and, I should prefer this use of low orders to that of *Attic* pilasters. In all buildings, where the principal destination is in the lower parts, such, besides churches, as halls of justice and others, theatres, &c. this method will succeed extremely well. But where the stories have no particular distinction, such as public granaries, treasuries, &c. indeed it will be better to begin with a low order, as for instance the *Tuscan*, and to place the *Doric* over it, &c. because this method will make the stories near of the same height*, or at least, their diminution is not striking, which is necessary in those buildings. But in this, there is no necessity to stick like SCAMMOZZI, so much to

* Provided the reduction of the diameter is less than a quarter, as will be shewn afterwards to be most proper in this case.







rank and precedence, that we should absolutely place the *Ionic* over the *Composite*, this over the *Doric*, &c. nay, I do not think it either proper, or any way judicious. The orders are of two kinds, plain and rich; by the reduction of the *Composite* order, there is a rich low, as well as a rich high order; let them go together when propriety requires rich orders; when it is otherwise, the *Ionic* and *Doric* may sort extremely well together.

WAS I to build public granaries, (and for the good of the nation I wish I was) I should give them the *Composite* and *Corinthian* orders; they would shew a richness that indicates abundance, and consequently rejoices and comforts, the beholder. But, to a royal treasury, I would be more sparing and give to such building the plainest decoration, lest it should be said, that the public money was squandered away upon relieves, &c.

NOTHING would be more improper, than to adorn the pediment or other external part of such building, as sometimes is done, with cornucopias pouring out their contents; though it is too often a true emblem of what is done within.

WHILST I am on this topic, I must add here, that columns are in general improper for hospitals: the plan should be as elegant, but the elevation as plain as possible; for, by this means, the establishment can afford more relief to the poor.

ANOTHER sort of buildings may require a great order above a lesser one, viz palaces, noblemen's seats, &c.

IN these, the great order being even with the state story, should not be of a lesser diameter than that at bottom, because it would make it lose the advantage in height, which it certainly must have and preserve.

IN order to obviate the impropriety of the effect, which a column of three feet diameter would have over one, which diminution has made less at top, though it has the same diameter at bottom; we must see whether we cannot dispense with another rule, which is that of the diminution of columns, and whether by making the undermost order without diminution, we should be guilty of any impropriety.

COLUMNS should be diminished to preserve the resemblance they were originally made to bear to trees, which have been the first columns erected. The utmost that can be made of this, is a general rule, which I certainly acknowledge and have enforced. But, if the necessity of making the upper order correspond with the state story, requires an high order; if to do this, I must give to the upper order the same diameter as that at bottom; if propriety requires, that the lower story being a basement story, should nevertheless be adorned like that at top with columns: if solidity forbids placing over a column, one, whose diameter at bottom is broader than the top of the under column; why should I not, for all these, overlook a rule which is only general, and whose principle is only to keep the resemblance of original columns? It is a licence I own, but they are only builders and not ARCHITECTS, that dare not take such on proper occasions. The critics in this art will say, that thus undiminished columns deserve no other name than that of *pillars*. *Pillar* be it ye critics! you may call them *fiddle-sticks* if you please.

IN the design of a palace which I made, and of part of whose elevation I give here a plate, I have made the state story of the *Corinthian* order, and the basement of the *Composite* reduced to my proportions, and without diminution. I might, instead of columns, have made use of pilasters, which require no diminution; but pilasters are not rich enough for my design, which is very extensive, and calculated for nothing less than royal magnificence. Yet, the walls have no other ornaments on their outside, besides the orders in their plainest state. I followed in it very strictly, what I have said in the first chapter of this work, to be the antique MANNER. I intend another story at top, which will be a kind of

Attic, but I have not yet determined whether I shall compose a low order for it, or whether I shall give it one of the great orders reduced in its diameter. The whole design is intended for publication, and shall be better explained when published: the intent of the plate I give here, is only to shew the effect of the reduction of the *Composite* order, and of its use in this case.

I SAID that it was VITRUVIUS's opinion, that the columns above should be a quarter less in their diameter, as well as a quarter less in height, than those below: these two proportions have been condemned by other authors, yet, I think they ought to be observed when a low order is set above a high one, and even then, the diameter might suffer a greater reduction. But when the columns should be disposed in the order prescribed by PALLADIO, their reduction should not be above a sixth or at most a fifth of the diameter of the order below. It will even be sufficient in some cases, if the diameter at bottom of the upper order, is equal to that at top of the lower order. This is the opinion of SCAMMOZZI, but I would not make of it, so universal a method as he does.

FROM all I have said on this subject, it results, that there are three sorts of dispositions for columns above one another, *viz.*

1st. Buildings with the great order at bottom, which may have a lesser order at top, made still less by the reduction of a quarter in its diameter.

2dly. Those, in which there is no distinction in stories, where the lower order is below, and the superior ones above, but made less by reduction of a fifth at most, and sometimes less, in their diameter from order to order, that is,

THE lower order being three feet in diameter, the order above will have about twenty-nine inches diameter, the next about twenty three, and so on; this disposition is very good for steeples and all buildings of great height in general.

3dly. Those in which the state story being over a basement story, the highest and richest order should be even to it, and in which, the order given to the basement is of the same diameter, and whose columns are undiminished to avoid a reduction in the diameter of the great order, over which a still lower order may be placed instead of *Attic* pillasters: this last order should be at least a quarter less in diameter; it might even be a third less without inconveniency.

IN the first class, the high order is at bottom, in the second it is at top, and in the third it is in the middle of the building.

THESE are innovations I own: but improvements are innovations; and if we are afraid of trespassing on the rules laid down by those who came before us, we may be certain that we shall never out do them.

IF to a building, in which there is on the outside more than one order of columns, we give pedestals to the lower order, whether a continued pedestal or single ones; this is no reason to do the same in the upper orders. Pedestals will load the building with a useless weight, and should be avoided except there is a ballustrade, in which case, they are in a manner necessary. Ballustrades therefore, should not take place, unless absolutely essential, as at the top of buildings of a certain magnificence, where statues or vases are required by propriety.

WHEN the higher orders are thus raised over others, it may be necessary to make the cornice of the entablature of less members than it should be according to the order; for if it is made of small and delicate members, they will be lost by the great distance between them and the beholders: yet the character of the order should be preserved in it as much as possible, such as the form of the modillions, dentells, &c.

I SAID

I SAID in the beginning of this chapter, that columns should only adorn public edifices or the mansions of persons of rank. In this usage of columns, a judicious choice of orders is necessary, especially in public edifices. Churches should not be all of the same richness of ARCHITECTURE, cathedrals ought to be distinguishable from other churches, as much by their magnificence as by their extent; even in parish churches, there is a difference to be made, and the building should be proportioned in some measure to the quality and rank of the parishioners in general: thus *St. Martin in the Fields*, is built of the *Corinthian* order and of a very rich design, with as much propriety, as that of *St. Leonard Shoreditch*, is of a plain *Doric*. Markets should never be of any order above the *Doric*, and that as plain as the order permits. Halls, according to their destination; those of justice of the richest orders. Thus will the ARCHITECT shew his judgement in a proper choice; for in these kind of buildings, his advice is generally followed by those who are at the head of the undertaking. As for noblemen and gentlemen's mansions or seats, it is not always in the power of the ARCHITECT to direct the choice of his employers, and it is to them the lecture on propriety should be read; but in general, they will have their way: yet, it will be more to their credit, if they would proportion the magnificence of their buildings to the coronet that can adorn the pediment.

I SPOKE in the last chapter, of some vain attempts to new orders: vain attempts I call them; for something more is necessary than altering, and even absolutely changing the ornaments of an order to make a new one. Ornaments are not the only characteristic of orders; they are the ensigns by which they are distinguished, but not the standard by which they are tried and proved: it is properly their proportions that make them of any particular order; there are many *Doric* columns that would appear of the *Tuscan* order, if ornaments only were considered.

THEREFORE, if any one would attempt to invent a new order of ARCHITECTURE worthy to be added to the number of great orders, it must be either lower than the *Tuscan*, or higher than the *Corinthian*, and there must be the same progressive proportion observed, between the new order and that, next which it is to be placed, as there is betwixt all the orders.

THE same difference of proportions must be in all its parts: in the pedestal, its height, number of mouldings, and their projection: in the base, which must have more mouldings than the *Corinthian*, or less than the *Tuscan*: in the shaft, in which the diminution must be raised or lowered.

THE capital must be totally different; it must also be an imitation of something in nature, properly adapted to this purpose, and not any insignificant ornament which extravagant fancy might produce.

THE architrave and cornice must be plainer or richer, and the whole order must be as much higher or lower as the others are respectively to each other.

THUS every member must serve to shew a distinction of order, both in size and number.

BUT what renders this still more difficult, and will of course, discourage those, whose abilities would perhaps be equal to the task; is the superlative beauty of the *Corinthian* order, and the extreme plainness of the *Tuscan*. To out-do the last in this point, is almost impossible, unless you erect a plain pillar without base or capital. But, who will attempt to surpass in richness and elegance the *Corinthian* order? Where shall we find in nature a basket more richly adorned than that of CALLIMACHUS? No where indeed! and, though new orders might be introduced with propriety, and might deserve applause and success, yet I think the prize of beauty and of elegance must not be disputed to this.

It is not surprising therefore, that those difficulties have hindered able ARCHITECTS from trying their powers, in order to produce something really new, and which at the same time that it differs from all other orders, has yet that sameness which all orders must have, viz. the same general parts, and the same general form.

NOTWITHSTANDING the difficulty of the task, I will attempt it. It will be at least a bold attempt, and is well worth the trial; if I do not succeed, it will be no disgrace to have miscarried like others, in an achievement which the Romans themselves, who had an obstacle less in their way, have hardly performed.

THE next chapter will contain the history and description of a new order.

C H A P. XIV.

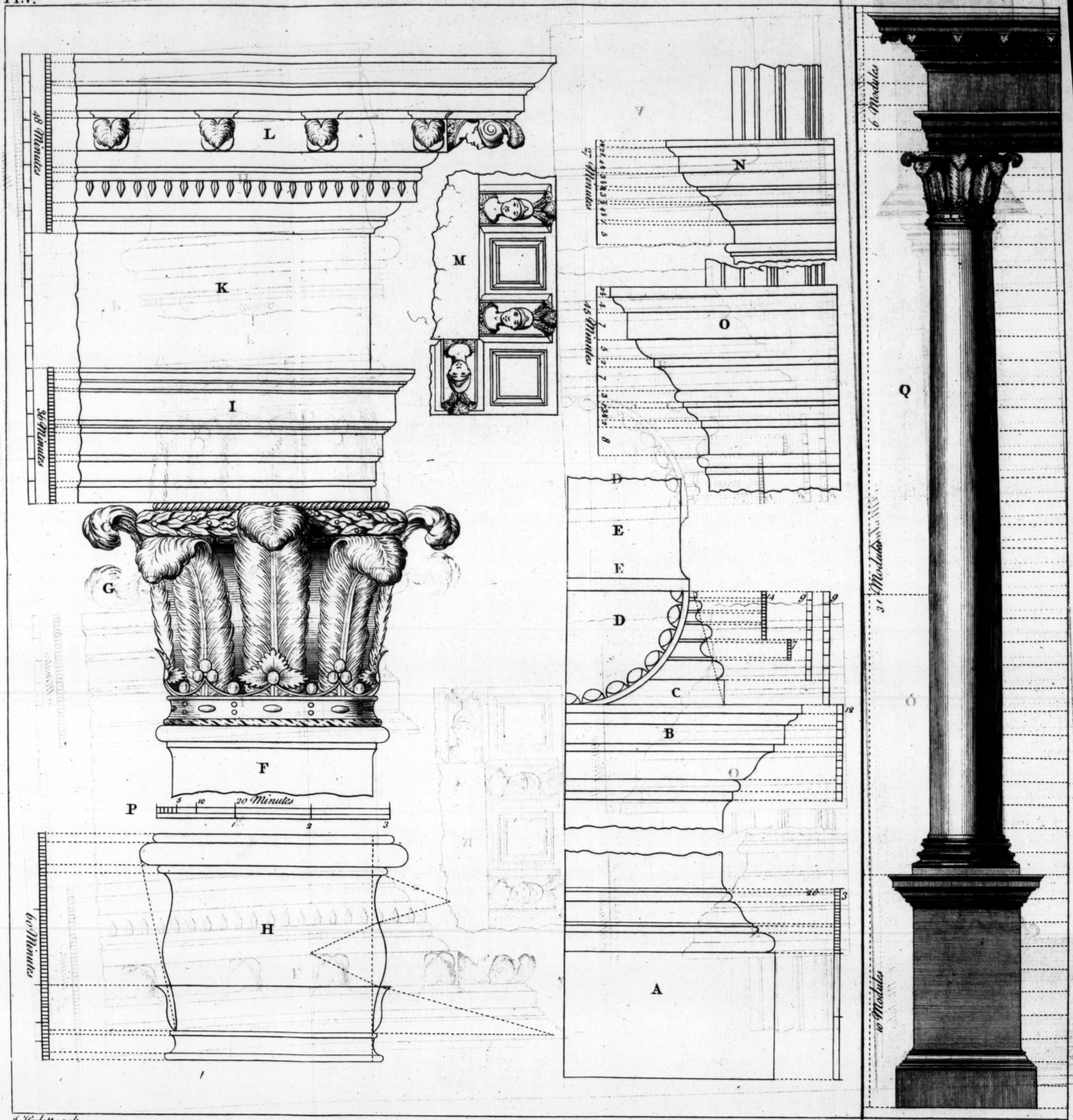
Of the Britannic Order.

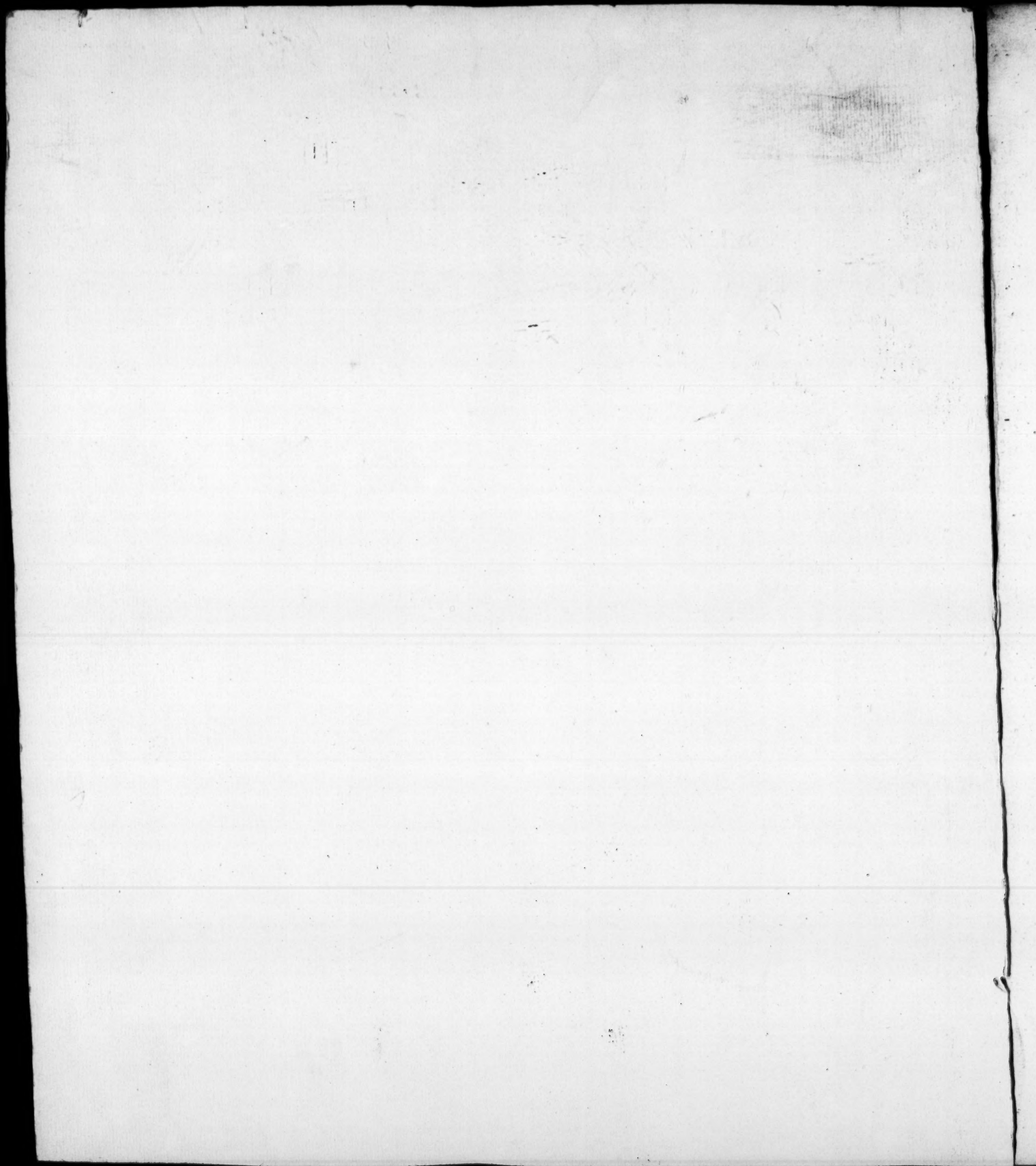
I AM sensible I shall arm against me two sorts of persons, viz. those that are bigotted to old customs and old inventions through prejudice, and those that are jealous and envious of the discoveries of other men. The one will ask, what necessity or even occasion is there for new orders? The others will affirm, that this new production is neither proper in itself, nor worthy to be compared to any one of the old orders, and is consequently, unfit to rank with them but must sink in oblivion. To this last sort of people, I have nothing to reply; because no good reasons can be given to those who are determined to find fault and depreciate the works of others at any rate. But to those of the first class, I shall answer; that indeed, there was no absolute necessity for an increase in the number of orders, but that this is no better reason to prohibit the introduction of a new one, than a man's wealth would be a reason that it should not be increased: it may not be necessary, yet it may be useful.

I own it would be a silly undertaking for a man to set his wits to work, merely to find out a new order; such invention must not be a far fetched one, it should be spontaneous; but if a subject fit for the purpose offers itself and invites me, why should I lose the opportunity of adding something to the rich stock of the art of ARCHITECTURE? I am indeed surprized, that an object which for ages has stood inviting the ARCHITECT, in a more attracting manner, than even the *Corinthian* basket invited CALLIMACHUS, has been neglected, and as it were spurned by all our British artists, notwithstanding its propriety, beauty, elegance and delicacy.

HOWEVER I will try to do it justice, and if it is but encouraged with the spirit it deserves as a national production, and as a national trophy, it will certainly be ranked in time with the other orders, even by those nations which now will certainly refuse to admit of it. But before I go further I must give here its history.

IN the reign of EDWARD the Third king of *England*, his eldest son and heir apparent to his crown, EDWARD prince of *Wales* (commonly called the BLACK PRINCE, on account of his armour) performed many gallant deeds of arms in the war which *England* then had with *France*. This, one of the greatest princes that ever graced royal blood, both on the account of his valour and of all sorts of social and domestic virtues, amongst other achievements took prisoner JOHN, king of *France*, and received perhaps not more glory from





from this rich capture, than from his gentle and respectful behaviour to the royal captive, as acknowledged by that monarch himself. At the battle of *Creffy* in the year 1346, he killed the king of *Bohemia* then in the French service, and took his banner.

THE ensign of this banner was, the royal diadem of *Bohemia*, with three ostrich's feathers standing in it, and this motto underneath, *ICH DIEN, i. e. I serve*. This glorious trophy became the banner of the conqueror, and ever since the succeeding princes of *Wales*, have taken it for their badge.

THE glorious origin of this princely badge, gives it certainly an eminent degree of propriety for the use I put it to, by adorning with it the capital of a new order; and the nature of the thing in itself, makes it quite fit for the purpose: the feathers tenderly bending forwards in the manner of a kind of volutes, give it a delicacy which is certainly above that of the *Corinthian* capital, if it is inferior to it in point of richness and beauty; and on account of this delicacy in my capital, and of the nobleness of its origin, it can without presumption rank above the gorgeous *Corinthian*, and be placed on a higher and more delicate shaft.

As the other orders have been allegorically attributed to several characters, and by some called after such characters, viz. the *Gigantic* order, instead of the *Tuscan*; the *Herculean*, instead of the *Doric*; the *Heroical*, instead of the *Composite*; the *Matronal*, instead of the *Ionic*; and the *Virginal* order, instead of the *Corinthian*; so my new order may be called the *Military* order, instead of the *Britannic*; for I dedicate it to the military, in honour of its origin, which it owes to military deeds; and I consecrate all columns of this order, that shall be erected henceforwards (to whatever use they may be applied) to the memory of the illustrious warrior, who has furnished me with the noble model I have copied.

I GIVE here a plate of a column of this order, on the same scale as that of the plates of the five orders, to enable the reader to compare it with them; and I have also designed all the members of this order at large, that they might be better understood in the description I am going to give of the whole.

THIS order rises above the *Corinthian* in the same proportion as all the other orders, rise from order to order, viz. one module in the pedestal, and two modules in the columns, the entablature having the same dimension as all the others.

General Proportions of the Britannic Order.

The pedestal has 10 modules in height.

The column 31

The entablature 6

And of course the whole order is forty-seven modules high, which is three modules more than the *Corinthian*.

PERRAULT has given to the *Composite* order, a pedestal which is ten modules high: this which I left out when I regulated the proportions of the five orders, I now take for this new one, as it suits the delicacy of it better than any other order. There is in this pedestal the same progressive increase, both in the number of its mouldings and in their projection, as there is in all the others from order to order; and this is calculated after the same principle as they all are, which is this. Two eighths of its height are given to the base, five to the die, and one to the cornice; two thirds of the base are left for the socle, and the other third being divided into twenty parts, serves for six mouldings, viz. six parts are for a torus, which like the socle has a projection of fourteen minutes; two for an astragal

astragal of nine minutes projection, one for a fillet, and seven for an inverted cimatum, these two last of eight minutes; three parts are for an astragal of three minutes, and one for another fillet of one minute projection.

THE cornice which has seven mouldings, is divided in its height into twelve parts: one is for the listell of twenty minutes projection, one and a half for an ogee of nineteen minutes, two and a half for the corona of fifteen minutes, one for a fillet twelve minutes, three and a half for a cimatum of the same projection, one and a half for an astragal of four minutes, and one for a fillet of two minutes projection.

WHEN the die of this pedestal is to be pannelled, it ought to be done like the *Corinthian*, first with a hollow pannel, but a little deeper in this order and with one moulding more; as to the pannel raised out of the hollow one, it should not be in this order an oblong square as in the *Corinthian*, but it should be made of an oval form to imitate a shield, which must be left plain if any inscription is to be upon it; otherwise it may be carved with proper ornaments for a shield; and in each of the four corners of the hollow pannel, the vacancy may be filled with either an English rose, which is the badge of the royal family, a laurel crown, or a medallion, in basso relievo.

THE base of the column is composed from that I made for the *Corinthian* order: for this, I reduced the size of all its members, in order to add an astragal at top, and a listell between that and the upper torus. The scales of parts upon the plate, will indicate the proportion of each member; and the projection is settled after the same rules as in all the other bases, viz. a strait line drawn from the lower angle of the plinth, through the centre of the lower torus to the top of the base, which has the ordinary height of all bases, i. e. a semi-diameter.

THE shaft has twenty-six modules and a half in height, which makes it very delicate and slender, and well adapted to the delicacy of its capital. The cincture at bottom, and astragal and cincture at top, are of the same proportions as I have given to all the other orders; the diminution is also the same with the other orders, (the *Tuscan* only excepted) only it begins a module higher than in the *Corinthian*, that is twelve modules from the bottom of the base, whereby the diminished part of the shaft has in length fifteen modules and a half, because the diminution ends ten minutes lower than the top of the shaft, as in the other orders.

As this shaft is the most delicate of all, care ought to be taken not to weaken it by flutings, and yet not to deprive the order of this ornament, when propriety requires it should receive it. Therefore, and also to make this shaft richer than the *Corinthian*, and to compensate thereby the advantage the *Corinthian* capital has over the *Britannic* in this point, I make its flutings more in number, which of course gives them a lesser depth; and moreover I make them cabled from bottom to top: by this method the column will not be weakened by the flutings, since the cavities made in its diameter will be next to nothing, and it will appear richer than with channels only. The number of channels I give to this shaft is twenty-eight; which makes seven for each face of the pilaster. The manner is expressed in the plan of the diameter of the shaft. The diameter of the channel which should be half a circle, has five minutes; so that the fillets between the channels are not quite one minute and a half wide, the cabling should be about the third part of a circle of five minutes diameter, its centre being placed in the middle of the circumference of the channel, which will bring its circumference even with the fillet.

SOME fiction is necessary to give a happy turn to such things as these. To place the king of *Bohemia's* crown and feathers on the top of this shaft, without any more ceremony,

mony, would be doing justice to the subject no better, than the plume of feathers would be able to support an entablature: this trophy is fit for the ornament of the capital, but is not proper to be the main body of it, which must be something substantial in its nature, and withall properly adapted to the ornament it is to be decorated with.

THEREFORE, on the top of this column we erect an altar to victory, and we lay at its foot as an offering, the trophy we obtained from the vanquished enemy: the crown serves as the ornament of the base of this altar, and the feathers rising around it, decorate the body of it as high as its cornice, which we adorn with a laurel crown.

To do this in a proper manner, I made application to the herald office, where a gentleman very politely and without accepting of any fee, permitted me to copy the design of the identical banner, out of a book which he exhibited to me, though I did not then acquaint him with the particular purpose I had in view; and here I return him my public thanks.

THE banner has but three feathers, therefore I was obliged in order to give the capital the same appearance, to make it of eight feathers, whereby three are seen on all sides. If it was a pilaster there should be twelve, because it would alter its appearance to put the shorter feathers right upon the angles; but on the contrary by making three feathers on each face of the capital of a pilaster, it will appear just the same, as the capital of the column does with eight.

THIS capital has three modules in height; which height distinguishes it perfectly from any other; and this proportion is besides, very good in regard to the height of the plume.

THE altar may be divided into three parts, the base, the trunk, and the cornice, which serves for, and may properly be called the abacus. I give twenty minutes to the base, thirty to the trunk, and ten to the abacus. The base is made of four members, which are all circular, and yet create no confusion, being intermixed of inward and outward curves. The lowest is an astragal two minutes high, and whose projection beyond the diameter of the shaft where the diminution ends, is two minutes; over this is a scotia five minutes high, and above that another astragal of one minute in height and projection; the extremities of the scotia are perpendicular to the centres of both astragals, and the scotia is very shallow, as it must not be less in its smaller part than the diameter of the column at top. The astragal at bottom of this base must be ermined; the scotia ornamented with large and small stones, as they are on the plate; the large ones are rubies, the others are emeralds; the upper astragal must remain plain. over this last member, is a cimatum twelve minutes in height, but not of the same projection as most common for this member when employed in other parts of the orders; its projection must not be here more than four minutes. This member is cut into strawberry leaves and pearls, as may be seen on the plate. In columns there are four trefoils and four clusters of pearls, but in pilasters there should be double the quantity; making a folded trefoil at each angle and one in the middle of each face, with a cluster of pearls between them.

THE trunk of the altar should be with a swelling: this is not prescribed whimsically and without reason. This swelling is wanted to keep the plume from folding inwards, which it might be supposed to do, if it had not some stay to support it behind and keep it strait. The trunk of the altar should not be in its smallest diameter less than the shaft is at top, viz. fifty-two minutes, and the centre of the swelling must be exactly in the middle of the trunk, taken between the cornice and the upper astragal of the base.

I have

I have designed the altar by itself on the plate, that this might be better understood. The projection of this swelling is settled by a line, drawn from the point where it begins just over the upper astragal, to the further projection of the cornice; and all the other projections are reckoned from the perpendicular dotted line, which marks the extremity of the diameter at the top of the column.

THE cornice or abacus has three members, all of them circular like those of the base; the reason why I make all the members of a circular form without any angular ones is, that fillets, listells, &c. would not here be seen from the ground, and would, by taking some room, make the circular members less in size, and consequently less conspicuous. However, I have taken care to dispose them in such manner, that they will not create any confusion by the similarity of their form. The members of this cornice are, an astragal two minutes high, and of four minutes projection; a torus six minutes in height, and of nine minutes projection; and, an astragal of two minutes in height, and five minutes projection. The upper astragal should be carved in the manner of a rope placed between the capital and the entablature. The torus, which is the corona of the altar, must be carved into the form of a laurel crown; and the under astragal (which is hardly seen, being partly hid by the plume) may be cut into beads and berries, as astragals in general are.

As to the position and the form of the plume, it must be as on the plate, to appear like its original; yet, I think it needless to prescribe any particular proportions, either for the breadth and length of the feathers, or for the folding of their upper end, since the best proportion will certainly be, to consult nature and avoid preposterousness.

By the description I have given of this capital, it will be found, that besides its particular appearance, it has another character absolutely different from all other capitals, viz. its abacus, which is round: in pilasters, the altar must be made square, and the abacus of course, must be made square also; but all the members must be circular in their height, as in the capitals of columns; and this is another particular character of this capital, that it has, whether on columns or on pilasters, no angular member.

THE entablature of this order corresponds with the columns, according to the same proportional decrease of its relative height, as those of the other orders do; being twelve minutes (more than in the *Corinthian*) less than three tenths of the height of the column. Its general proportions are the same with those of the other orders, viz. thirty-six minutes for the architrave, as many for the freeze, and forty-eight for the cornice; and this entablature appears very light on the top of this tall column, which is according to propriety, and keeps due proportion with the delicacy of the order.

THE character of its architrave is four fascils, all divided by circular mouldings, as may be seen on the plate, where the whole entablature is at large.

WHEN the column is fluted, the freeze must be ornamented also, and its ornaments should be very rich, but nothing too large. Delicacy, the characteristic of this order, must be observed in this, but not carried to an effeminate minuteness. The order is both a military and a delicate order, and may be compared to a tall, slender youth; in whom, however, nothing feminine, besides a fair complexion, is to be found.

To the cornice, I give fourteen members, all intermixed circular and angular; its character is like the *Corinthian*, modillions and dentells; but, to make it distinct from that, and to keep up the military character, I make those ornaments quite different from what they are in the *Corinthian* order.

THE denticulus is cut into spear's heads inverted, and stuck into an astragal which is over it: the modillions (which represent the end of rafters, though they are in reality,
of

of no use, but merely ornamental, and might be omitted in all orders without impropriety, if they were not become a character of the order) are in this, cut in the form of *BELLONA's* bust; the feather of the helmet of this goddess of war is all that is seen in front; but the whole bust is seen in profile sideways, and in front from right underneath. The fess of the corona being divided into pannels by the modillions, these pannels should be hollowed with mouldings, and left empty if the order is plain; but if the column is fluted the bottom of the pannel should be ornamented with an *English* rose, or any other ornament adapted to the order.

THIS column being very tall and slender, cannot admit of a very large intercolumniation: the most proper manner of disposition, will be coupled columns, leaving very minutes distance between the columns coupled together, and two diameters and a half for the great distance; if they are disposed singly, in colonades the interval must not be wider than pycnostyle, and systyle for the middle intercolumniation; against walls, they may be disposed in the eustyle manner, and will have a fine effect; under arches they must be coupled, and then they may admit of three diameters, or at most, three and a half.

WHEN arcades are to be erected between the columns and under the architrave, the same proportions given for the five orders will do likewise for this; and here I give two tables, one for those without pedestals, and the other for those with pedestals. These tables are calculated after the same principles as those I gave for the other orders in my tenth chapter.

TABLE for the first class.

Being columns without pedestals.

Height 31 modules, breadth 15 modules.

Height.	Real Modules.	
Pillaster	—	—
Impost	—	—
Couffinet	—	—
Semicircle	—	—
Archivolte	—	—
Naked above	—	—
Modules	31	0

TABLE for the second class.

Being columns upon pedestals.

Height 41 modules, breadth 18 modules.

Height.	Real Modules.	
Pillaster	—	—
Impost	—	—
Couffinet	—	—
Semicircle	—	—
Archivolte	—	—
Naked above	—	—
Modules	41	0

THE breadth of the opening of the pillasters, is the same as in the other orders.

THE proper use of this order will be in any building, where a rich and delicate ARCHITECTURE is requisite, as palaces, churches, and especially cathedrals, triumphal arches, mausoleums for heroes losing their lives in the service of their country, theatres, &c.

I HAVE, in this undertaking, observed to make this new order I propose, a real and different order from any other in all its parts. If the present age does not approve of the invention, perhaps posterity will judge otherwise; I believe it only wants antiquity, and when found among ruins, it may perhaps please many, whose genius would have condemned it at its birth.

EXPLANATION of the PLATE of the BRITANNIC ORDER.

- A** **B** **A**SE of the pedestal with part of the die.
- B** Cornice of ditto, with part of ditto.
- C** Base of the column.
- D** Part of plan of the column with the cincture and plan of the flutings.
- E** Part of the shaft at bottom.
- F** Part of ditto at top.
- G** The capital.
- H** The altar by itself, which is the main body of the capital.
- I** The architrave.
- K** The freeze.
- L** The cornice.
- M** Plan of the soffit of the corona, and of the modillions.
- N** Impost for arcades of the first class, with part of the pillaster and archivolt.
- O** Imposts for arcades of the second class, with part of ditto.
- P** A scale of three modules for all the members at large.
- Q** The whole order together, on the same scale as that for the plate of the five orders.



F I N I S

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A PRINT, representing the Frontispiece of a Temple of the BRITANNIC Order, designed in the Antique Manner ; will be published in a short Time. It is the very first Design ever made of this Order, and which will shew its Effect.

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